The Professionalization of Surgery: An Examination of Surgeon-Patient Encounters in Britain 1745-1858

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in History, the University of Auckland, [2021].

Abstract

Between 1745 and 1858, surgery in Great Britain developed from a manual craft into a scientific medical discipline and surgeons transformed themselves from the manual workers of medicine into a professional medical elite. The aims of this thesis are to examine this professionalization of surgery and what it meant in practical terms for the relationship between surgeons and patients. A review was undertaken of historical sources in the humanities, medicine, education, art and English literature, and an analysis of patients' and surgeons' perspectives.

The professionalization of surgery was achieved through the occupation of surgery adopting the characteristics of a profession, and by its practitioners - the surgeons - embracing the attributes of professionalism. Surgeons organised themselves into surgical corporations and focused on learning and enhancing surgical knowledge and skills. They embraced certain attributes and accepted new standards of behaviour and ethical codes to guide their personal conduct and self-regulation.

The experiences of six patients who underwent major surgery prior to the advent of anaesthesia, and of fifty-six patients who consulted their surgeon by letter post, revealed the challenges they faced during consultations, diagnosis, and treatment. The surgeons they encountered varied from the few who were domineering and oblivious to their suffering, to the many who were understanding, compassionate and sympathetic.

Surgeons experienced emotional distress and disturbed sleep before operating in peacetime and war, but self-control and emotional restraint enabled them to complete surgical procedures. Exploring their emotions helped them articulate their feelings and shape their identities. The desirable attributes of an ideal surgeon were described by them as humanity, compassion, integrity, communication, a scientific approach, and the avoidance of unnecessary surgery. Deficiencies included over-eagerness to operate, poor technical skills, and undue focus on daring and surgical speed. A critical scientific approach to new discoveries was displayed by the many surgeons who advocated further research and experience before acknowledging the safety of anaesthesia. The findings described in this thesis contribute to a better understanding of the professionalization of surgery and how this had an impact on the relationship between surgeons and patients during this period.

Dedication

This thesis is dedicated to my beloved parents Percy and Maura Collins, whose lives were devoted to the wellbeing and education of their family.

Acknowledgements

I owe special thanks to my supervisor Professor Linda Bryder for supporting my application to undertake this project at the University of Auckland. I have been greatly helped by her knowledge, skills, and advice during my research and in the preparation of many iterations of this manuscript. I am also grateful to Professor Kim Phillips who went beyond the university obligations of a second supervisor to provide me with valuable guidance and encouragement.

I wish to thank eminent historians Emeritus Professor Christopher Lawrence and Dr Mike Brown for their guidance and willingness to share their extensive knowledge. I also wish to thank my fellow history student Dr Sheree Trotter for the opportunity to profit from her learning experiences and knowledge. I benefited greatly from the independent observations, support and advocacy of colleagues and friends. These include Sir Richard Faull, Dr Ron Trubuhovich, Dr Campbell Miles, Professor Peter Stone, Dr Tom Miller and Ms Vanessa Smith (MA). I am grateful to my inspirational friends Bob and Freda Narev and for their citing of the following text from *Ethics of our Fathers* as an encouragement, “You are not obligated to complete the work, but neither are you free to desist from it.”

I am particularly indebted to Professor Freddie Hamdy, Nuffield Professor of Surgery at the University of Oxford, and Head of the Nuffield Department of Surgical Sciences, and to successive Principals of Green Templeton College for the opportunity to study in Oxford. I also wish to acknowledge my thanks to the various Presidents of the Royal Colleges of Surgeons of England, Edinburgh, and Ireland, and of the Royal Australasian College of Surgeons, for access to their college libraries and archival collections.

Finally, I wish to thank my wife Jennifer and our son Andrew and his family for their love, support, and encouragement on this interesting journey of discovery.

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Chapter 1

Introduction

In his reply to a toast to the guests at a luncheon given in 1944 by The Royal College of Physicians of London, the Prime Minister Winston Churchill remarked:

> As between the old and the new you have undoubtedly the advantage of antiquity. This College must play its part in keeping alive the historic tradition of the medical profession and must ever foster those high standards of professional behaviour which distinguish a profession from a trade, … the longer you can look back, the farther you can look forward.[1]

In his statement, Churchill recognised the occupation of medicine as a profession and acknowledged the importance of high standards of professional behaviour or professionalism. The concept of a profession arose in the Middle Ages with the rise of the universities and the founding of the faculties of divinity, law, and physic or medicine. Those who studied and taught in these three university faculties were regarded as members of the 'learned professions.' Although the word 'profession' was frequently used in the eighteenth century in relation to medical practitioners by the Scottish physician and moralist John Gregory, it was not until the nineteenth century that medicine became established as a 'practicing or consulting profession' in the community. This culminated in the passing of the Medical Act 1858 *(An Act to Regulate the Qualifications of Practitioners in Medicine and Surgery)* and the first state recognition of the medical profession and of 'medical professionalism' in Britain.[2]

Professionalization has been defined as 'the process by which an occupation undergoes transformation to become a profession.'[3] In the case of surgery, this involved not only the occupation of surgery but also its practitioners the surgeons. The journey towards the professionalization of medicine and surgery took different paths. The European universities which were founded by the Catholic Church and under its influence, fostered the study of medicine but not of surgery as the Church disapproved of the shedding of blood. The early surgeons therefore stood apart from the university-educated physicians and joined with the barbers. This led to their history taking a different course from the physicians and

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[1] W. Churchill, 'Premier and Physicians', *The Lancet*, 243, 6289 (1944), pp.347-49.
[2] J. Gregory, *Lectures on the Duties and Qualifications of a Physician,* W. Strahan and T. Cadell, London, 1772; Medical Act 1858: An Act to Regulate the Qualifications of Practitioners in Medicine and Surgery, www.legislation.gov.uk.ukpga. Vict. enacted. Accessed 18 August 2020.
[3] G. Millerson, *The Qualifying Associations: A Study in Professionalization*, Routledge & Kegan Paul, London, 1964, p. 10.

was marked by surgery remaining as a trade rather than a profession for almost three centuries. The professionalization of surgery was eventually achieved through the occupation of surgery adopting the characteristics of a profession, and by its practitioners - the surgeons - embracing the attributes of professionalism during their encounters with patients.

Aims and methodology

The aims of this thesis are to establish how these two components of the professionalization of surgery were achieved in Great Britain, and what this meant in practical terms for the relationship between surgeons and patients. I have chosen to concentrate on the period between 1745 and 1858 because this was the era during which surgery was transformed from a manual craft into an elite profession. The structure of this project will include a study of historical sources in the fields of humanities, medicine, education, art, and English literature and an analysis of the perspectives of patients and surgeons on their professional encounters.

The first component of the professionalization of surgery relates to surgery as an occupation. For my investigation of this component I have selected as the most appropriate model that which was first developed by the sociologists Carr-Saunders and Wilson in 1933.[4] Some sociologists of professions have used a form of comparative analysis in their studies, but that by Carr-Saunders and Wilson is more suitable for reviewing a single profession like surgery.[5] These authors provided a starting point by describing a number of characteristics which they considered were shared by the acknowledged professions. Such characteristics could then be used in analyses to determine whether a particular occupation could be deemed a profession. Since then, experts in sociology, law, history, philosophy, ethics, medicine, and organization, have each documented their views on the important elements of a profession, and despite the controversaries between some authors, most were in general agreement with Carr-Saunders and Wilson.

The second component of the professionalization of surgery relates to professionalism. The term “professionalism” has usually been interpreted to encompass a list of attributes, values, and behaviours. However, some authors have also included service, as they regarded this to be an integral part of the foundational purpose of professionalism.[6] Medical professionalism has therefore been used to describe a combination of desirable

[4] A. Carr-Saunders, P. Wilson, *The Professions*, Oxford University Press, London, 1933.
[5] R. O’Day, *The Professions in Early Modern England, 1450-1800: Servants of the Commonweal,* Pearson Education Limited, Harlow, 2000, pp.3-17.
[6] M. Wynia, M. Papadakis, W. Sullivan, F. Hafferty, ‘More than a List of Values and Desired Behaviours: A Foundational Understanding of Medical Professionalism’, *Academic Medicine*, 89, 2 (2014), pp.1-3.

attributes, service commitments and obligations, as well as certain principles, values, and virtues.

In this thesis, I will argue that the professionalization of surgery as an occupation was achieved by surgeons organizing themselves into surgical corporations, and by focusing on learning, enhancing, and maintaining the knowledge and skills necessary to serve the surgical needs of the community. Secondly, I will contend that the professionalization of surgeons came about through their embrace of the attributes of professionalism defined in the standards of social and occupational behaviour and ethical codes deemed necessary for satisfactory surgeon-patient encounters and their own self-regulation.

These claims raise some major questions. The first relates to how surgeons were organised into corporations and how surgical knowledge and skills were taught, learned, assessed, practised, expanded, and maintained. This will be addressed by reviewing the development of surgery as an educated, trained, and scientific professional occupation. The second question concerns the development and introduction of standards of behaviour and ethical codes into surgical practice. This will be investigated by reviewing the history of manners and morality and the formalization of ethical codes including those developed specifically for surgery and surgeons. The third question relates to whether the behaviour of surgeons during their encounters with patients demonstrated the attributes of professionalism as expressed in these codes of conduct. To find the answer, a review will be undertaken firstly of the perspectives of the patients who recorded their experiences of engagements with surgeons during consultations and surgery in their stories and correspondence. The perspectives of surgeons on these encounters will then be addressed by examining the comments they made about interactions with patients in their writings and lectures. This will be followed by a review of their sensibilities, emotions, and mindset during surgery, and of the professional attributes they regarded as desirable for surgeons. But first, I will explore the historiography of professions and professionalism.

Historiography of professions and professionalism

This study of professions and professionalism draws upon a wide range of sources extending from the foundational work of Carr-Saunders and Wilson in 1933 to *The Routledge Companion to the Professions and Professionalism* published in 2016.[7] The

[7] Carr-Saunders, Wilson, *The Professions*, 1933; P. Wright, 'What is a Profession?', *The Canadian Bar Review,* (1951), 29, 7 (1951), pp. 748-757; W. Goode, 'The Profession: Reports and Opinion, Encroachment, Charlatanism, and the Emerging Profession, Psychology, Sociology and Medicine', *American Sociological Review,* 25, 6 (1960), pp. 902-914, URL: http://www.jstor.com/stable/2089988. Accessed 10 July 2020; J. Wade, 'Public Responsibilities of the Learned Professions', *Louisiana Law Review*, 21, 1 (1960), pp, 130-139; G. Millerson, *The Qualifying Associations,* 1964; H. Perkin, *The Origins of Modern English Society 1780-1880,*

term's "profession" and "professionalism" and the concepts and definitions which apply to them, have continued to expand since the initial work by Carr-Saunders and Wilson. As a result, the characteristics and attributes required for an occupation and individuals to claim these appellations for themselves have continued to be refined. In their seminal publication, Carr-Saunders and Wilson established a framework for considering professional occupations by outlining the following necessary characteristics or elements of a profession:

> The practitioners by virtue of prolonged and specialised intellectual training, have acquired a technique which enables them to render a specialised service to the community … [which] they perform for a fixed remuneration whether by way of a fixed fee or salary. They develop a sense of responsibility for the technique which they manifest in their concern for the competence and honour of the practitioners as a whole – a concern which is sometimes shared with the State. They build up associations, upon which they erect, with or without the co-operation of the State, machinery for imposing tests of competence and enforcing the observance of certain standards of conduct, … and the maintenance of an ethical code.[8]

In 1960, American sociologist William Goode described the two core characteristics of a profession as prolonged specialized training in a body of abstract knowledge, and what he described as a 'collectivity or service orientation.' In addition, he believed that as an occupation became more professionalized, it acquired features which were sociologically derived from these two characteristics and listed ten such traits.[9] Many of these traits were similar to those described by Carr-Saunders and Wilson, with the noted addition that 'the profession determines its own standards of education and training.'[10] In 1969, the celebrated English social historian Harold Perkin described all true professions as:

Routledge & Kegan Paul Ltd, London, 1969; B. Barber, 'Some Problems in the Sociology of Professions', *Daedalus*, 92, 4 (1963), p. 672; J. Ahern, 'An Historical Study of the Professions and the Professional Education in the United States', PhD Thesis, Loyola University, Chicago, Illinois, 1970; E. Friedson, *Profession of Medicine: A Study of the Sociology of Applied Knowledge,* University of Chicago Press, Chicago and London, 1970 & 1988; G. Holmes, Augustan England: Professions, State and Society, 1680-1780, G. Allen& Unwin, London, 1982; A. Buchanan, 'Is There a Medical Profession in the House?', in R. Spence, D. Shimm, A. Buchanan, eds, *Conflicts of Interest in Clinical Practice and Research*, Oxford University Press, New York, 1996, pp, 107-109; E. Pellegrino, 'Trust and Distrust in Professional Ethics', in E, Pellegrino, R. Veatch, J. Langan, eds., *Ethics, Trust, and the Professions: Philosophical and Cultural Aspects*, Georgetown University Press, Washington D.C, 1991; O'Day, *The Professions in Early Modern England, 1450-1800,* 2000; C. MacKenzie, 'Professionalism and Medicine', *Musculoskeletal Journal of Hospital for Special Surgery (HSSJ),* 3, (2007), pp. 222-227; M. Dent, I. Bourgeault, J-L. Denis, E. Kuhlmann, eds., *The Routledge Companion to the Professions and Professionalism,* Routledge Taylor & Francis Group, London, 2016.

[8] Carr-Saunders, Wilson, *The Professions,* pp. 284-286.

[9] Goode, *The Profession,* pp. 902-914.

[10] Goode, *The Profession,* pp. 902-914.

> characterized by expert, esoteric service demanding integrity in the purveyor and trust in the client and the community, and by non-competitive reward in the form of a fixed salary or standard and unquestioned fee.[11]

Perkins built on the concept of the competence and honour of the practitioners described earlier by Carr-Saunders and Wilson, through his focus on the integrity of the provider of the service. Importantly, he introduced the concept of trust. In 1982 sociologist Paul Starr referred to three kinds of attributes - collegiate, cognitive, and moral – as being usually cited in definitions of the term 'profession', and he illustrated these attributes in the following definition of a profession as:

> an occupation that regulates itself through systematic, required training and collegial discipline; that has a base in technical, specialized knowledge; and that has a service rather than profit orientation, enshrined in its code of ethics.[12]

The element of independence in standards of education and training noted by Goode was further emphasized by the celebrated American sociologist Eliot Friedson. He considered autonomy from outside influence to be the single most important criteria of a profession, and noted that:

> unlike other occupations, professions are deliberately granted autonomy, including the exclusive right to determine who can legitimately do its work and how the work should be done.[13]

Furthermore, Friedson extended this autonomy to encompass the content of the work itself and the training of its practitioners. He believed that once a profession had attained this degree of independence, it could only continue to retain this status through the patronage and protection of some elite segment of society. For the State or some other such group to grant such a position, it would have had to be assured by the profession in question that it was the 'most qualified by virtue of its formal training and the moral fibre of its members.'[14] The lawyer and High Court Judge Peter Wright, and William Goode both highlighted a commitment to service amongst the hallmarks of a profession.[15] However, Friedson did not see this as a necessary attribute of individual workers or members, but regarded such

[11] H. Perkin, *The Origins of Modern English Society,* 1969, p. 254.
[12] P. Starr, *The Social Transformation of American Medicine,* Basic Books, Inc, New York, 1982, p.15.
[13] E. Friedson, *Profession of Medicine: A Study of the Sociology of Applied Knowledge,* University of Chicago Press, Chicago and London, 1970 & 1988p.72.
[14] Friedson, *Profession of Medicine,* p.74.
[15] Wright, 'What is a Profession?' pp. 748-757; Goode, *The Profession,* pp.902-914.

service as an institutional attribute of the occupation or a claim made about the membership as a body.[16]

Philosopher and medical ethicist Allen Buchanan described professions as social constructs and outlined two distinct but overlapping conceptions, one as 'ideal' and the other as 'sociological'. He described the elements in his 'ideal' conception as:

> a special knowledge of a practical sort; a commitment to preserving and enhancing the special knowledge; a commitment by the members of the profession to achieving excellence in the practice of the profession; an intrinsic and dominant commitment to serving others on whose behalf the special knowledge is applied; effective collective self-regulation by the professional group, including the articulation of standards of competence for the profession, [and] measures for inculcating in individual members the commitment to these standards and sanctions.[17]

These elements are an extension of those described earlier by Carr-Saunders, Wilson and by Friedson. In his sociological conception of a profession, Buchanan highlighted the special status that is awarded to its members as well as the special privileges and financial advantages, and agreed with Friedson on the importance of independence.[18] Buchanan regarded these elements as 'socially constructed inequalities, … characterized by an asymmetry of knowledge and capabilities, … the physician has knowledge and capabilities that the patient lacks.'[19] It was because of this asymmetry in the doctor-patient relationship, that Buchanan emphasized the importance of trust to the patient, as alluded to earlier by Perkins. The physician and ethicist Edmund Pellegrino stressed how illness, old age, or infancy can create vulnerability in the patient and lead them to become dependent on the good will and motivation of those in whom they place their trust. He added that:

> this is the situation in our relationships with the professions whom circumstances force us to trust. We are forced to trust professionals if we wish to access their knowledge and skill.[20]

Speaking from his personal experience, medical ethicist Laurence McCullough acknowledged that if a patient wishes to have the benefits of medicine, they must trust their

[16] Friedson, *Profession of Medicine*, p.81.
[17] Buchanan, 'Is There a Medical Profession in the House?' pp,107-109.
[18] Buchanan, 'Is There a Medical Profession in the House?', pp.109-110.
[19] Buchanan, 'Is There a Medical Profession in the House?', pp,109-110.
[20] Pellegrino, 'Trust and Distrust in Professional Ethics', p.69.

physician.[21] Expanding on the meaning of trust to the patient, sociologist Bernard Barber outlined three kinds of expectations:

> the most general is an expectation of the persistence and fulfilment of the natural and the moral social orders, second is [the] expectation of technically competent role performance from those involved with us in social relationships and systems. And third is expectation that partners in interaction will carry out their fiduciary obligations and responsibilities, that is, their duties in certain situations to place other's interests before our own.[22]

In terms of establishing the profession of surgery and ensuring trust in the surgeon-patient relationship, the expectations of the patient would therefore have required moral social order, a technically competent performance, and the fulfilment of fiduciary obligations and responsibilities by the surgeons.

The Australian Council of Professions have brought together a helpful summary of the different characteristics described by previous authors in their current definition of a 'profession':

> A profession is a disciplined group of individuals who adhere to ethical standards and who hold themselves out as and are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level, and who are prepared to apply this knowledge and exercise these skills in the interest of others.[23]

In the explanatory information included in the definition to facilitate its application, the Council added that a code of ethics governs each profession and requires behaviour and practice beyond the personal moral obligations of an individual. This code of ethics also defines and demands high standards of behaviour in respect of services provided to the public and in dealing with professional colleagues. Furthermore, these codes must be enforced by the profession and acknowledged and accepted by the public.[24]

In 1995, historian Michael Roberts drew attention to the problems of applying retrospective assumptions about the nature of professional authority on the basis that professionalism denotes a set of ideal characteristics relatively static in meaning over time.

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[21] L. McCullough, *John Gregory and the Invention of Professional Medical Ethics and the Profession of Medicine,* Kluwer Academic Publishers, Dordrecht, 1998, p.3.
[22] B. Barber, *The Logic and Limits of Trust,* Rutgers University Press, New Brunswick, NJ, 1983, p.9.
[23] Australian Council of Professions, 'What is a Profession?', www. https://professions.org.au> what-is-a-professional, Accessed 16 July 2020.
[24] Australian Council of Professions, 'What is a Profession?'

Quoting historians of science and medicine, he wrote that, 'this is a recipe for the involuntary importation of teleology – assumptions based on end intentions - into historical analysis.'[25] Organizational expert Stephen Ackroyd in his 2016 critical analysis of the literature on professionalism, similarly concluded that there was a teleological basis to certain author's listings of characteristics of professions in their claims that these were successful, because of their attributes of prolonged education, specialized knowledge, regulatory associations, developed rules and codes of ethics.[26] In the introduction to their 2016 publication on *"Professions and Professionalism"*, the editors considered professions and professionalism as not fixed concepts, but reflecting variable institutional arrangements, jurisdictional relations within and between occupations and professions and the state, employers and clients, and the country within which they are analysed.[27] These comments relate more to recent times than to the period of my study.

The separate elements of professionalism have long been significant in doctor-patient relationships. One aspect of professionalism relating to behaviour assumed high significance during a Parliamentary Hearing on medical education in Britain in 1834. During this Hearing before a "Select Committee on Medical Education", the propriety of manners and morality in medical practice was emphasized, as well as the need to ensure that medical graduates recognised the importance of these attributes and had acquired them, by the time of their graduation from British universities.[28]

The continuing importance of professionalism is reflected in the use of measurable behavioural expectations by medical education institutions for the purposes of assessment during education, certification and re-certification of residents and specialists.[29] The expectation has been that medical professionals should exemplify a set of attributes and shared values including compassion, justice, honesty, respect, altruism, and service.[30] For

[25] M. Roberts, 'The Politics of Professionalization: MPs, Medical Men, and the 1858 Medical Act', *Medical History*, 2009, 53, (2009), p.38; L. Jordanova, 'The Social Construction of Medical Knowledge', *Social History of Medicine*, 1995, 8, 3 (1995), p.72.

[26] S. Ackroyd, 'Sociological and Organisational Theories of Professions and Professionalism', in M. Dent, I. Bourgeault, J-L. Denis, E. Kuhlmann, eds., *The Routledge Companion to the Professions and Professionalism,* Routledge Taylor & Francis Group, London, 2016, p.16.

[27] M. Dent, I. Bourgeault, J-L. Denis, E. Kuhlmann, 'General Introduction: The Changing World of Professions and Professionalism', in M. Dent, I. Bourgeault, J-L. Denis, E. Kuhlmann, eds., *The Routledge Companion to the Professions and Professionalism*, Routledge Taylor & Francis Group, London, 2016, p.6.

[28] Report from The Select Committee on Medical Education: With the Minutes of Evidence and Appendix, Part 1, Royal College of Physicians, House of Commons, London, 1834, pp.87-95. www.wellcomecollection.org>works, accessed 17 July, 2020.

[29] I. Dickson, D. Watters, I. Graham, P. Montgomery, J. Collins, 'Guide to the Assessment of Competence and Performance in Practising Surgeons', *Australian and New Zealand Journal of Surgery,* 79, (2009), pp, 198-204; C. Lesser, C. Lucy, B. Egener, C. Braddock, 'A Behavioural and Systems View of Professionalism', *Journal of The American Medical Association*, 304, 24 (2019), pp.2732-2737.

[30] Wynia, Papadakis, Sullivan, Hafferty, 'More than a List of Values and Desired Behaviours, pp.1-3.

these assessment purposes, The American Board of Medical Specialities has defined professionalism as:

> a belief system about how best to organize and deliver health care, which calls on group members to jointly declare ("profess") what the public and individual patients can expect regarding shared competency standards and ethical values, and to implement trustworthy means to ensure that all medical professionals live up to these promises.[31]

Based on the findings from these reviews, it may be concluded that for the occupation of surgery to be regarded as a profession, and for surgeons to demonstrate professionalism, certain characteristics, attributes, and functions would have been necessary. These may be summarised as the possession of a specialised body of knowledge and skills, acquired through education, training and research, and which enabled surgeons to deliver a specialised surgical service to the community. In addition, autonomy from outside influence was necessary in the selection of those who wished to embark on a surgical career, and how they were educated, trained, and assessed. Independence would also have been necessary regarding the choice of surgical procedures offered to patients and how these were to be performed. To be regarded as a profession, surgery would also have had to demonstrate a commitment to achieving excellence and the enhancement and maintenance of knowledge and skills through learning, research, and scholarship. Further evidence would have been necessary to demonstrate that surgical associations or corporations had been formed, and that these entities organised assessment of competence, and had available standards of behaviour and ethical codes to enable the self-regulation of its members.

For surgeons to be members of a profession they would have had to demonstrate professionalism and be regarded as worthy of trust by patients and the public. They would be required to display certain attributes, values, and behaviours, including humanity, sympathy, respect, integrity, and appropriate manners, morality, and ethical behaviour.

Questions to be addressed in this thesis

The first question relates to how surgical knowledge and skills came to be taught, learned, practiced, expanded, and maintained. Although the history of surgery dates to its early medieval origins, there is a tendency to regard its development as commencing in the nineteenth century and of ignoring everything that went before. An example of this were the remarks made by the contemporary French surgeon Bertrand Gossett in 1956, that the

[31] F. Hafferty, M. Papadakis, W. Sullivan, M. Wynia, *The American Board of Medical Specialities Ethics and Professionalism Committee Definition of Professionalism*, Chicago, III, American Board of Medical Specialties, 2012. www.abms.org>media>abms-definition-of-medical-p..., Accessed 16 July 2020.

history of surgery began in the year 1846 with the discovery of anaesthesia and the possibility of painless surgery. He regarded everything previously as 'but a night of ignorance, of torture, and of fruitless wandering in the dark.'[32]

Historian Roy Porter noted that scant credit has been given by historians to the old-style surgeons, and that 'standard historiography represents surgery as a crude and bloody art, at least prior to anaesthesia and antisepsis in the mid-nineteenth century.'[33] However, as Porter pointed out, the day-to-day activities of these surgeons were very different and mainly one of running minor repairs and consultations, and far from the 'bloody art' of operations like amputations. Medical historian Irvine Loudon has provided evidence from early hospital records to show that most operations were of a more minor nature, with major procedures such as breast surgery, lithotomy and amputations only rarely performed.[34]

While the introduction of anaesthesia and antisepsis during the mid-nineteenth century were major and far-reaching developments, the transformation of surgeons and surgery had already begun before this time. Historian Stephen Jacyna wrote that the granting of a Royal Charter which established the Royal College of Surgeons of London in 1800, was 'a grant that potentially revolutionized the status of surgery.'[35]

Historian Christopher Lawrence has remarked that:

> it does seem increasingly clear, … that nineteenth-century histories, which always invoked surgery's connections with barbering in order to emphasise its humble origins and to tell a heroic success story, were eclipsing a major part of surgical history. Since the very early Middle Ages there has always been an elite class of highly specialised, theoretically sophisticated and technically accomplished surgical practitioners.[36]

Similarly, historian Peter Stanley referred to the condensation apparent 'in the way in which medical historians have so long countenanced a simplistic view of surgeons and their practice.'[37] Stanley cited Christopher Lawrence's essay in *Medical History, Surgical Practice*

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[32] J. Thorwald, *The Century of the Surgeon,* Thames and Hudson, London, 1957, quoted from the preface.
[33] R. Porter, 'The Eighteenth Century', in L. Conrad, M. Neve, V. Nutton, R. Porter, A. Wear, eds., *The Western Medical Tradition: 800 B.C. – 1800 A.D*, Cambridge University Press, Cambridge, 1995, p.434.
[34] I. Loudon, *Medical Care and the General Practitioner 1750-1850,* Clarendon Press, Oxford, 1986, p.75.
[35] S. Jacyna, 'Medicine in Transformation, 1800-1849', in W. Bynum, A. Hardy, S. Jacyna, C. Lawrence, E. Tansey, eds., *The Western Medical Tradition: 1800 - 2000*, Cambridge University Press, 2006, p. 30.
[36] C. Lawrence, 'Democratic, Divine and Heroic: The History and Historiography of Surgery', in C. Lawrence, ed., *Medical Theory, Surgical Practice: Studies in The History of Surgery,* Routledge, London & New York, 1992, p.18.
[37] P. Stanley, *For Fear of Pain: British Surgery 1790-1850*, Rodophi, Amsterdam, 2003, p.14.

(1992), in which he described the tendency of surgeons to belittle the achievements of their predecessors, to glorify the advances of their own era.[38]

Although the professionalization of surgery was concentrated between the years 1745 and 1858, the foundations had begun some time previously. Christopher Lawrence cited the famous London surgeon and author Samuel Sharp (1709 -1778), who wrote in 1750 that, 'perhaps there never was a period of time in which any art was more cultivated than surgery has been for these last thirty years.'[39] Two hundred years later sociologists Carr-Saunders and Wilson regarded the rise in the profession of surgery in the eighteenth century as due in part to a succession of able surgeons dating back to the sixteenth century and provided the names of some of these individuals.[40]

The distinguished English surgeon and historian Sir D'Arcy Power (1885 -1941), observed that there 'existed a band of men … [who] made a serious endeavour to advance the best interests of the profession in face of the greatest difficulties.'[41] He elucidated further on how surgeons like John Woodall (1556-1643), Richard Wiseman (1622-1676), William Cheselden (1688-1752), and Percival Pott (1714-1786) had already begun to develop the art and science of surgery during the seventeenth and eighteenth centuries. Christopher Lawrence referred to Wiseman as the 'first of the really great surgeons who lifted the surgical profession from its state of subordination to the physicians.'[42] Historian Richard Barnett wrote that similar developments in surgery had begun to emerge in Europe culminating in France in 1731 when Louis XV extended royal patronage with the foundation of the Academie Royale de Chirurgie.[43]

Historians have drawn on the characterization and descriptions of surgeons and surgery at the beginning and end of my period of study to illustrate some of the changes which took place over this time. From the middle of the eighteenth-century, surgeons and other members of the medical profession, came under increasing scrutiny through satire and

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[38] Stanley, *For Fear of Pain: British Surgery 1790-1850*, p. 14, Lawrence, 'Democratic, Divine and Heroic, p.4.
[39] Lawrence, 'Democratic, Divine and Heroic, p.5; S. Sharp, A Critical Enquiry into the Present State of Surgery, 2nd edn J. & R. Tonson, S. Draper, London, 1750, Preface. http://books.google.com/books?id=iHEFAAAQAAJ&oe=UTF-8; https://wellcomecollection.org/works/r7zy52gh, Both accessed 19 December 2020.
[40] Carr-Saunders, Wilson, *The Professions*, p.74.
[41] D. Power, 'How Surgery Became a Profession in London', *Reprinted from The Medical Magazine,* The Medical Magazine Association, London, 1899, pp.16-17, https://archive.org.details/b2236674. Accessed 5 – 7. December 2018; D. Power, 'The Evolution of the Surgeon in London'*, St Bartholomew's Hospital Journal,* Allard & Son, Bartholomew Press, London, 1912, pp.2-8, https://archive.org.details/b2236674. Accessed 5 – 7. December 2018.
[42] C. Lawrence, 'Surgery and its Histories: Purposes and Contents', in T. Schlich, ed., *The Palgrave Handbook of the History of Surgery,* Palgrave Macmillan, London, 2018, p.36.
[43] R. Barnett, *Crucial Interventions: An Illustrated Treatise of the Principles and Practice of Nineteenth-Century Surgery*, Thames & Hudson LTD, London, 2015, p.39.

caricature, as did lawyers and the clergy. Historians have been reluctant to use this imagery as primary source material due to concerns about the extent to which it can be seen to reflect reliability or prevailing views. Medical practitioners including surgeons were often portrayed as 'vain, greedy, arrogant, ambitious, often lecherous and ignorant men, indifferent to the suffering of their patients.'[44] One of the best-known examples of such caricature is the *The Amputation,* by the artist and caricaturist Thomas Rowlandson (1756 – 1827) and first published in 1785 (Figure 1). In this representation, Rowlandson offers his opinion of a surgeon's practice and its probable outcome.

A bespectacled robust-looking surgeon wearing a carpenter's apron kneels on the doomed leg of a terrified and screaming man held by a strong attendant, while his other leg was tied to a chair. Surrounded by a motley group of bewigged and bespectacled doctors including an overweight physician who stands aloof and at a distance, the surgeon saws off the leg with all who were present impervious to the patient's pain and suffering. In the same room a body lies on a table awaiting anatomical dissection, and a surgeon's bag with assorted tools of a carpenter and anatomist and a femur spill out on the floor.

On the walls are articulated skeletons and a poster listing the names of the 'Examined and Approved Surgeons', including such cynical names as Samuel Sawbone, Launcelot Slashmuscle and Benjamin Bowels. Rowlandson portrayed the scene as both a dissecting and operating room, emphasising the similarity between the two procedures – almost certain to 'excite terror.'[45] The accuracy of Rowland's caricature of an operating theatre scene can be corroborated by referring to illustrations in contemporary text-books of surgery.[46] Those chosen for portrayal in such satire or caricature were usually associated with some alleged dishonourable practice, whereas the images of the more responsible and reputable doctors 'can be found in more sober and traditional fashion – conforming to the artistic conventions of the times – in portraits at the Royal Colleges of Physicians and Surgeons.'[47] Representations of the public perceptions of surgeons in satire and caricature eventually influenced them to review and refashion their image in order to gain the trust and respect of the public. I will discuss how surgeons used portraits in their efforts to improve their professional and public image in Chapter 2.

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[44] F. Haslam, *From Hogarth to Rowlandson: Medicine in Art in in Eighteenth Century Britain*, Liverpool University Press, Liverpool, 1996, p.2.
[45] Haslam, *From Hogarth to Rowlandson,* pp. 273-274.
[46] L. Heister, *A General System of Surgery in Three Parts*, translated into English from the Latin, W. Innys, London, 1745, pp. 341-344, 350, Figures 2-9, Plate 14 facing page 350. http://www.archive./details/generalsystemofs00heis. Accessed 11 September 2020.
[47] Haslam, *From Hogarth to Rowlandson*, p.12.

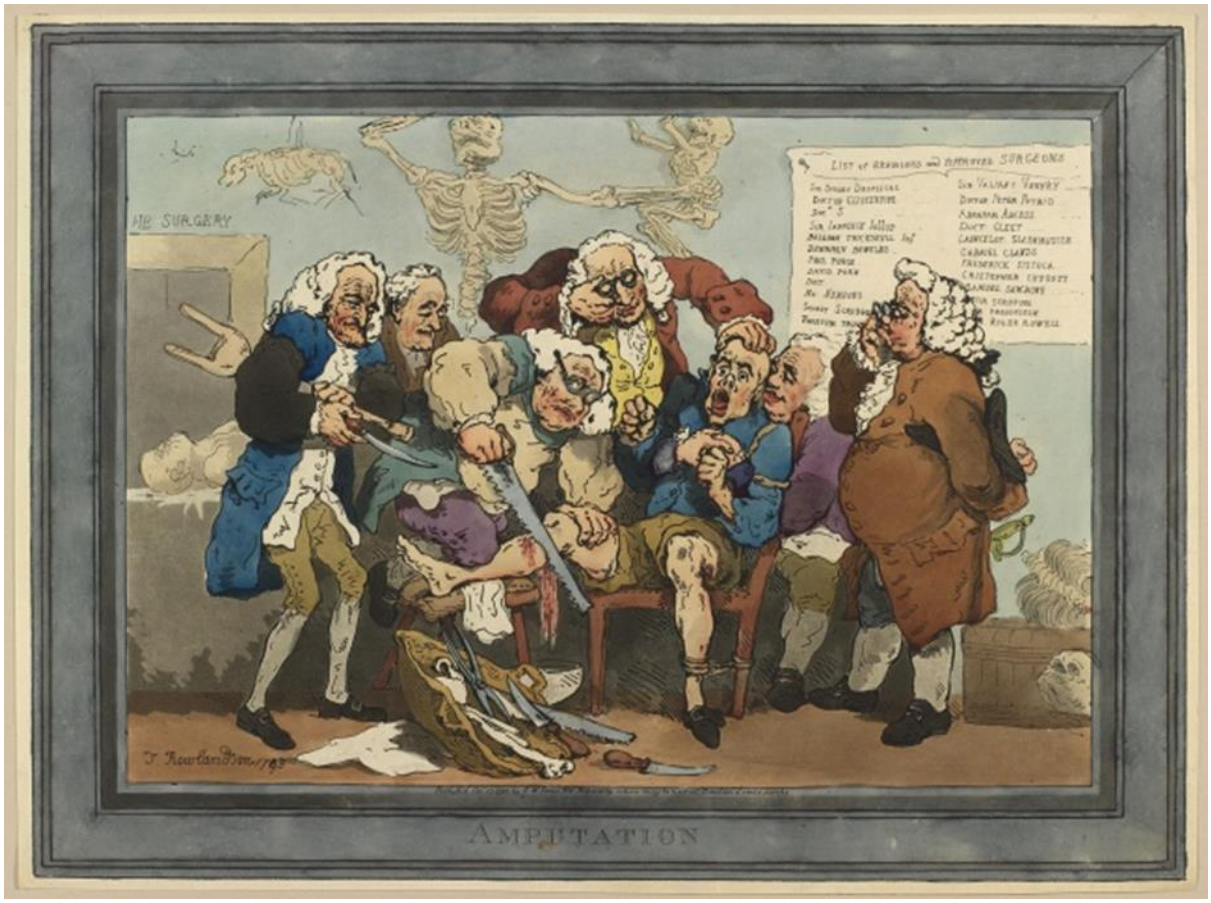

Figure 1. ‘Amputation’ by Thomas Rowlandson (1793). Wellcome Library L0034242.

Some surgeons were themselves critical of the state of surgery at that time. English surgeon Sir James Earle described surgery in 1749 as being very imperfect and a time when the maxim, ‘Dolor medicina doloris,’ remained unrefuted.[48] He wrote that:

> the severe treatment of the old school, in the operative part and in the application, continued in force; the first principles of surgery, the natural process and powers of healing were either not understood or not attended to; painful and escharotic dressings were continually employed, and the actual cautery was in such frequent

[48] I am grateful to Associate Professor Marcus Wilson, University of Auckland, for his translation of ‘Dolor medicina doloris’ as: ‘Pain, the medicine of pain’, or awareness of a particular source of pain is suppressed by the onset of an even more acute pain.

use, that, at times when the surgeons visited the hospital, it was regularly heated and prepared as part of the necessary apparatus.[49]

One hundred years later, a transformation had occurred in the technical and scientific aspects in surgery. The dreaded red-hot cautery-iron had gone, and anaesthesia and painless surgery had become available. This led the London surgeon Frederick Skey to remark in 1850 that:

> the operating surgeon is not a mechanic, but the agent through whose instrumentality is carried into action the highest principles of scientific medicine, principles demanding an intimacy with the soundest physiology.[50]

Changes had also begun to take place in medical education and training. In 1995 historian and educationalist Thomas Bonner described the latter years of the eighteenth century as a 'turbulent yet creative time in the history of medical study.'[51] The long-established practice of physicians acquiring a university education and of surgeons and apothecaries serving an apprenticeship in the community had begun to change. The newly founded hospitals became places of teaching, learning and research as well as healing. New and extended facilities for education were organised and provided new opportunities for learning by the increasing numbers of those training to be medical practitioners. Concepts in medical education began to change and new subjects were introduced. At the same time, surgery had begun to expand, and the operating theatre became an important location for learning, as well as a place for the demonstration of surgical dexterity, showmanship, and performance. The behaviour of the surgeons in this area shaped much of the contemporary public image of surgeons and surgery as reflected in Rowlandson's *Amputation*.

An important component of the professionalization of surgery was the formation of surgical corporations or associations. These were established in England, Scotland, and Ireland by the middle of the eighteenth century, and despite a chequered history particularly in England, they were to play an important role in the professionalization of surgery. The increasing involvement by surgeons in scientific research and experimentation, led to the enhancement of knowledge, expansion of surgical techniques, and the development of new surgical instruments. New discoveries required surgeons to adopt a more 'scientific'

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[49] J. Earle, *The Chirurgical Works of Percival Pott, To Which is Added A Short Account of the Life of the Author*, 3 vols, J. Johnson, London, vol 1, 1790, pp. xi-xiii. http://archive.org/details/b21461818_ooi. Accessed 9.08.2019.
[50] F. Skey, *Operative Surgery*, John Churchill, London,1850. p. viii. http://archive.org/stream/operativesurgery00#page/n7/mode/2up. Accessed repeatedly 2017 to 2020.
[51] T. Bonner, *Becoming a Physician: Medical Education in Britain, France, Germany and the United States, 1750-1945*, Oxford University Press, New York, 1995, p.12.

approach in their assessment and I will examine their response to the advent of anaesthesia as a measure of their level of scientific advancement.

In order to provide the contextual background for the study of surgeons' scientific approach to the introduction of anaesthesia, I will first investigate the contemporary conceptualization of pain and suffering, and how this might have influenced the acceptance or rejection of anaesthesia. An important aspect of this was how the patients and the community perceived the pain and suffering frequently associated with their illness, and always with surgery. Several noted historians have researched and written on different aspects of pain. Roselyn Rey has highlighted the many challenges involved in drawing up the history of pain.[52] Peter Stanley has undertaken an extensive review of the pain associated with surgery from the perspective of the patients, their families and friends, and the surgeons.[53] Joanna Bourke has focused on the experience, nature and interpretation of suffering and the different responses to it by the patients, the public and the surgeons.[54] I will draw on these resources and engage with their arguments, as well as with primary material in my goal to contribute the historiography of pain associated with surgery.

The second major question to be addressed relates to the development and introduction of standards of behaviour and ethical codes in surgical practice. The eighteenth century witnessed changes in philosophy, science, religion, and communication. With the increasing affluence, a more literate and exacting public emerged, with an increased demand for medical services. Medical historian Irvine Loudon has expounded on these developments and the increasing available commercial opportunities for medical practitioners as well as the competition which occurred in medical practice during the period of my study.[55] Individual doctors competed with each other and with the various 'healers' for patients, and the resulting emergence of profiteering practitioners led to the exploitation of the public by some regulars as well as by irregulars or quacks. Faced with this new challenge, the more honourable and public-spirited medical practitioners required some form of standards and criteria by which to judge, advise, and regulate the behaviour of medical practitioners, as well as a means of isolating those whom they regarded as charlatans.

Bioethicist Robert Baker and historian Mary Fissell have shown there was little evidence that medical practitioners used the Hippocratic Oath for these purposes[56].

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[52] R. Rey, *The History of Pain,* Translated by L. Wallace, J. Cadden and S. Cadden. Harvard University Press, Cambridge, Massachusetts,1995, pp.1-2.
[53] Stanley, *For Fear of Pain: British Surgery 1790-1850*, 2003.
[54] J. Bourke, *The Story of Pain*: *From Prayer to Painkillers,* Oxford University Press, New York, 2014, pp.5-15.
[55] Loudon, *Medical Care and the General Practitioner*, pp.100-125.
[56] R. Baker. 'Medical Propriety and Impropriety in the English-Speaking World Prior to the Formalization of Medical Ethics', in R. Baker, D. Porter, R. Porter, eds., *Codification of Medical Morality: Historical and*

According to Fissell, behaviour was governed by general codes of conduct, and the norms and constraints described by 'manners' and 'courtesy.'[57] However, by the second half of the eighteenth century the status of manners as the predominant measure of conduct or behaviour in society had begun to decline. Fissell maintained that this crisis in manners occurred when medical manners and morals became unglued, for 'no longer were codes of conduct based on courtesy functional, … manners could be bought and sold, and so could not function as a virtue.'[58]

Fissell's remarks were similar to those made previously by historians Michael Curtin and Charles Pullen, that manners had become a commodity which were used primarily for self-advancement.[59] The eighteenth-century decline in the status of manners as the primary hallmark of acceptable behaviour, and the chaos which then existed in medical practice in Britain, led to a search for a different philosophy of medicine and a greater understanding of morals, behaviour and ethical codes, upon which to base the health care of the population and governance of the conduct of its medical practitioners. In this thesis, I will examine the developments which took place in manners, morality, and ethical codes, to understand the role this played in the professionalization of surgery.

The third question to be addressed relates to whether there is historical evidence that surgeons embraced the attributes of professionalism and demonstrated these during their encounters with patients. Bioethicist and surgeon Miles Little observed in 2002 that 'the special relationships that exist, at least in potential, between patient and surgeon can only be understood through the stories of those who endure and deliver surgical care.'[60]

And yet, as social historian Julia Epstein remarked in 1986, the history of medicine has customarily focused on medical practitioners and institutions and has treated patients as part of the given precondition for medical knowledge rather than its central concern.[61] Similarly, historian and writer Richard Barnett observed in 2015 that surgical histories which revolve around prominent surgeons and their pioneering operations, 'do so at the risk of

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Philosophical Studies of the Formation of Western Medical Morality in the Eighteenth and Nineteenth Centuries. Vol 1: Medical Ethics and Etiquette in the Eighteenth Century, Springer-Science + Business Media, B.V.1993, p. 16; M. Fissell, 'Innocent and Honourable Bribes: Medical Manners in Eighteenth-Century Britain', in Baker, Porter, Porter, eds., *The Codification of Medical Morality*, p. 19.

[57] Fissell, 'Innocent and Honourable Bribes', p.19.

[58] Fissell, 'Innocent and Honourable Bribes, p.32, p.42.

[59] M. Curtin, 'A Question of Manners: Status and Gender in Etiquette and Courtesy'*, The Journal of Modern History*, 57, 3, (1985), p.40; C. Pullen, 'Lord Chesterfield and English-Century Appearance and Reality', *Studies in English Literature, 1500-1900*, Rice University, 8, 3 (1968), p.503, https://www.jstor.org./stable/449616. Accessed 26. 09. 2018.

[60] M. Little, 'The Fivefold Root of an Ethics of Surgery', *Bioethics*, 16, 3 (2002), pp.183-201.

[61] J. Epstein, 'Writing the Unspeakable: Fanny Burney's Mastectomy and Fictive Body'*, Representations,* University of California Press, 16, (1986), p.150.

excluding other stories – most importantly, those of patients and the long aftermath of surgery.'[62] He illustrated examples of the consequences of surgery as:

> the memory of pain and its persistence, the task of learning to live in an altered, perhaps diminished body, and this feeling of a compromise between survival and wholeness.[63]

The historiography of surgery is about more than just famous surgeons, but as Little has pointed out, both sides of the story are crucial to an overall understanding of the nature of the surgeon-patient relationship. What is sometimes lacking in historiography is the voice of the patients based on their personal experiences of encounters with surgeons during surgery and consultations.

The bioethicist and family physician Howard Brody stated in 2003 that:

> suffering is produced and alleviated by the meaning that one attaches to one's experience. The primary human mechanism for attaching meaning to particular experiences is to tell stories about them.[64]

Brody also claimed that 'we can best understand what it means to be sick by attending carefully to the stories people tell us about illness.'[65] Although the account by the English novelist and dramatist Fanny Burney of her mastectomy in 1811 and of some others are well-known and have been the subject of much scholarship, there is generally a lack of information about the personal experiences of those patients who consulted surgeons or underwent surgery prior to the advent of anaesthesia.[66] In this thesis, I will add to the existing literature on patients' stories, by seeking accounts from others, and by re-analysing some of those already familiar, in order to further amplify their experiences and their perception of the attitudes of the surgeons during these encounters. This will include questions on how understanding the surgeons were of their patient's fears and dilemmas, their anguish, pain, and misery, and whether they demonstrated the professional attributes of compassion and sympathy.

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[62] Barnett, *Crucial* Interventions, p.244.
[63] Barnett, *Crucial* Interventions, p.244.
[64] H. Brody, *Stories of Sickness,* 2nd edn, Oxford University Press, Oxford, 2003, p.13.
[65] Brody, *Stories of Sickness,* p.28.
[66] Burney to Burney, 22 March 1812, The Henry W. and Albert A. Berg Collection of English and American Literature, The New York Public Library, New York; *The Journals and Letters of Fanny Burney (Madame D'Arblay*), J. Hemlow, ed., Electronic edition, Vol 6, 1975, pp. 596-616; J. Collins, 'Mastectomy with Tears: Breast Cancer Surgery in the Early Nineteenth Century', *Australian and New Zealand Journal of Surgery,* 86 (2016), pp.720-24.

Only a small percentage of patients who consulted surgeons during my study period underwent an operation, as most were treated with oral medicines, external ointments, dressings, and the other limited remedies then available. Some patients consulted their local surgeon-apothecary while others requested the opinion of surgeons who lived at a distance from their own location, resulting in consultations taking place by post. In the latter case advice and a prescription would then be received from the surgeon by letter.[67] The surgeon would usually request the patient to keep them informed by letter of their progress, and either they, a relative or a friend, or their local apothecary would do so. A search for surviving correspondence from these interactions between the patient and their surgeon will be undertaken and analysed to provide further insights into the surgeon/patient relationships of that period.

With the increase in literacy, print culture and wide readership and a greater awareness of medicine and medical topics by the population, one other possible source of contemporary information on the attitudes and feelings of patients and the wider community regarding consultations, diagnosis, and treatment, might be found in novels and other similar writings of the day. I will therefore search these sources for such narratives.

An important part of understanding the surgeon-patient relationships and of the search for evidence of the surgeons' professionalism lies in the perspectives of the surgeons on these encounters. Information on this topic is sparse in the literature and further study has therefore been undertaken to reveal what surgeons may have written and spoken on this area. The sensibilities, emotions, feelings, and mindset of the contemporary surgeons, and what they valued as the desirable attributes of a surgeon are integral to an understanding of the behaviour of surgeons. Until recently, there has been a sparsity of information on the emotions and feelings of surgeons and this may perhaps be explained as due to historians considering the topic of emotions as peripheral to the historical enterprise.[68] Historian Lynda Payne noted that surgeons have always had to learn some form of detachment to help them cope with the upsetting aspects of surgery.[69] However, historian Roselyn Rey observed this was not so much about detachment as an awareness that the inflicted pain was not absent but merely set aside for the duration of the operation.[70] Peter Stanley did not necessarily

[67] D. Porter, R. Porter, *Patient's Progress: Doctors and Doctoring in Eighteenth-Century England*, Polity Press, Oxford, England, 1989, pp.76-78.
[68] B. Rosenwein, 'Worrying about Emotions in History', *The American Historical Review*, 107, 3 (2002), pp. 821-825, http://doi.org/10.1086/ahr/107.3.821. Accessed 2018 -2020.
[69] L. Payne, *With Words and Knives: Learning Medical Dispassion in Early Modern England,* Ashgate Publishing Limited, Aldershot, 2007, p.1.
[70] R. Rey, *The History of Pain*, p.67.

agree that dispassion was the normal practice amongst surgeons and cited a number of surgeons who expressed fear and anxiety about performing surgery.[71]

Historian Mike Brown's recent research into the emotions and feelings of surgeons has made a significant contribution to our understanding of their sensibilities. He has shown how compassion and emotional expression 'played an important part in shaping the cultures of early nineteenth-century operative surgery as well as the identities of its practitioners.'[72] Historians Nicholas Whitfield and Thomas Schlich have written that:

> in the history of science, a skilled performance has often been connected to particular affective regimes, typically involving self-control, emotional restraint and the tempering of passions.[73]

These authors noted that similar examples can be found in the history of medicine, where:

> at one extreme is the cultivated indifference of the modern physician, who wields disinterest in the face of adversary and human suffering, a detachment founded historically on a contrast between emotional excess, which is seen to interfere with skill, and emotional restraint, which enables it.[74]

Furthermore, Whitfield and Schick cited a number of references to show that 'in the domain of emotional restraint, it is the surgeon who is the undisputed master.'[75] They also cited the observation made by Sigmund Freud in 1912 who on recommending 'emotional coldness' for physicians practicing psychoanalysis, gave the example of the surgeon who 'puts aside all his feelings, even his human sympathy, and concentrates his mental forces on the single aim of performing the operation as skilfully as possible.'[76]

The association between surgery and emotions during my study period is an important part of this project. I will explore this association by analysing the comments made by contemporary surgeons about their emotions and feelings relating to performing operations

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[71] Stanley, *For Fear of Pain,* pp.189-211.

[72] M. Brown, 'Surgery and Emotions: The Era before Anaesthesia', in T. Schlich, ed., *The Palgrave Handbook of the History of Surgery*, Palgrave Macmillan, Springer Nature, London, 2018, pp.326 – 48.

[73] N. Whitfield, T. Schlich, 'Editorial: Skills through History'*, Medical History*, 59, 3 (2015), p.352; B. Rosenwein, p.827; P. White, 'The Emotional Economy of Science: Introduction', I*sis,* 100, 4 (2009), pp.811-26.

[74] Whitfield, Schlich,'Editorial: Skills through History'*,* p.352.

[75] Whitfield, Schlich,'Editorial: Skills through History', p.352; L. Payne, *With Words and Knives,* 2007; Stanley, *For Fear of Pain*; C. Lawrence, 'Medical Minds, Surgical Bodies: Corporeality and the Doctors', in C. Lawrence, S. Shapin, eds., *Science Incarnate: Historical Embodiments of Natural Knowledge,* University of Chicago Press, Chicago & London, 1998, pp.156-201.

[76] Whitfield, Schlich,'Editorial: Skills through History'*,* p.352; S. Freud, 'Recommendations to Physicians Practicing Psycho-Analysis (1912)', in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, James Strachey (trans), Hogarth Press and the Institute of Psychoanalysis, London, 1958, vol. 12, p.115.

in peacetime and in war. As part of this analysis, I will review whether the efforts made by surgical teachers during the education and training of surgical students were successful in preparing these learners to cope with the distressing demands they would encounter.

Primary sources

In searching for primary source material to help address the questions posed this thesis, I have explored the different genres of representation which were used to describe and characterize surgeons and surgery during the period of my study. Current historiographical theory teaches us that each of these has its own rules, conventions, and codes, and the affect these may have on what was written, said, and portrayed. I am aware that the genre of my sources must be considered during their interpretation and when making comparisons between them.

Art historian Martin Kemp pointed out in 1996, that in addition to the use of the written word, engraved and painted images generated by those who observed medicine from outside its professional institutions played a significant part in the social discourse of medicine.[77] Historian and physician Fiona Haslam has shown in her 1996 publication *From Hogarth to Rowlandson: Medicine in Art in Eighteenth Century Britain*, that 'medical images formed one way of communicating a social, moral or political message which would be widely understood.'[78] Concerns about the extent to which these images can be seen to reflect prevailing views has resulted in a reluctance by historians to use these images as primary historical sources. However, comparing different representations such as visual images with contemporary literary images, and the perusal of medical treatises of the time, has resulted in their wider acceptance.[79]

Haslam has also noted that the use of satire to ridicule a subject does not necessary invalidate its use as a basic resource for historical study. She holds this to be true because 'satire had to be based on the truth if its messages were to be understood and passed on effectively.'[80] Furthermore, this 'truth' can be validated from a review of contemporary medical treatises, papers, and journals. This validation and a greater awareness that such imagery is culturally determined, has led to greater confidence and in their acceptance by historians. This has provided me with greater confidence to study these resources and include Rowlandson's *Amputation* as a primary source of representation of an operation in the late eighteenth century.

[77] Haslam, *From Hogarth to Rowlandson,* Foreword by Martin Kemp, pp. v-vi.
[78] Haslam, *From Hogarth to Rowlandson*, p.3.
[79] Haslam, *From Hogarth to Rowlandson*, pp. v-vi.
[80] Haslam, *From Hogarth to Rowlandson,* p. xv.

Details on the historical origins of medical practitioners and their development up to the early nineteenth century were sourced from the 1830 writings of the London barrister and expert John Willcock.[81] For a greater insight into the establishment and development of surgical organisations, I have read each of the original manuscripts which recorded the details of the monthly meetings of the Company of Surgeons of London between 1745 and 1798. These 'Company's Minutes' are held in the archives of the Royal College of Surgeons of England.[82]*The Lancet* published several critical articles and editorials on the Royal College of Surgeons of London (later of England) and other topics relevant to my project between 1823 and 1850 and I will refer to these resources throughout the text of this thesis.[83] For in-depth details and discussion on the contemporary education and training of surgeons and surgeon-apothecaries, I found the comprehensive description published in 1800 by the Leeds surgeon James Lucas enormously helpful.[84] Similarly, the general comments made in 1800 by the London surgeon-apothecary James Parkinson on medical education and his advice to would-be medical students and those contemplating becoming surgeons was very informative.[85]

In order to understand the contemporary surgeons' comprehension of symptoms, diagnosis, pathology and the treatment of surgical diseases, I read a number of textbooks on surgery written by surgeons between the years 1772 and 1850.[86] These have been supplemented by the comments made by individual surgeons in their other writings and their

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[81] J. Willcock, *The Laws Relating to the Medical Profession; With an Account of the Rise and Progress of its Various Orders*, A. Strahan, W. Clarke, London, 1830, https://archive.org/details/lawsrelatingtome00will, Accessed 2017-2020.

[82] Minutes of The Company of Surgeons of London, Royal College of Surgeons of England Library & Archives, COS/1/2, 1745-98, accessed May & June 2018.

[83] *The Lancet,* 1822-1850.

[84] J. Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* S. Hazard, Bath, 1800, http://archive.org>details, Accessed between 2017-2020.

[85] J. Parkinson, *The Hospital Pupil: Or An Essay Intended to Facilitate the Study of Medicine and Surgery,* H.D. Symonds, London,1800, http://archive.org>details>TheHospitalPupil, accessed 2017-2020.

[86] W. Rowley, *A Treatise on the Management of Female Breasts during Childbed; and Several New Observations on Cancerous Disease with Prescriptions*, J. Wingrove, E. Newberry, T. Hookham, London, 1772; H. Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* J. Johnson, London, 1784; B. Bell, *A System of Surgery*: Volumes 1- 7 in 6 Editions, Bell & Bradfute, Edinburgh, G. & J Robinson, and Murray & Hingley, London, 1782 – 1796; H. Fearon, *A Treatise on Cancers; with an Account of a New and Successful Manner of Operating, Particularly in Cancers of the Breast or Testis,* J. Johnson, London, 1790; J. Earle, *The Chirurgical Works of Percival Pott, to which is added "A Short Account of the Life of the Author"*, 3 vols, J. Johnson, G & G & J, Robinson et al, London, 1790; J. Bell, *The Principles of Surgery*, T. Cadell & W.Davies, Edinburgh, 1801; J. Abernethy, *The Surgical Works of John Abernethy*, Longman & Hurst, London, 1811 – 1817; S. Cooper, *A Dictionary of Practical Surgery: Comprehending All the Most Interesting Improvements From Earliest Times Down to The Present Period*, Collins & Hannay, New York, 1823; A. Cooper, *Illustrations of the Diseases of the Breast*, Part 1, Longman, Rees, Orme, Brown, & Green, London, 1829; R. Liston, *Practical Surgery*, John Churchill, London, 1837; J. Syme, *The Principles of Surgery*, Second Edition, John Carfrae& Son, Maclachlan & Stewart, Edinburgh, 1837; F. Skey, *Operative Surgery*, John Churchill, London,1850.

lectures. For my review of the level of scientific approach displayed by surgeons, I have quoted from the inquiry into this topic in 1847 by the English surgeon James Vincent.[87] I used the reactions of contemporary practising surgeons to the advent of anaesthesia and painless surgery as a surrogate marker of their scientific approach to surgery. These were sourced from the personal writings of the leading surgeons of the day and included Henry Bigelow, Thomas Curling, and James Miller.[88] I have also included comments made by the physician John Snow who was the first specialist anaesthetist in Britain and author of the comprehensive review of the introduction of anaesthesia published in 1848.[89]

The obstetrician James Simpson discovered the anaesthetic qualities of chloroform in 1847 and I quote directly from his own publications as well as from an authentic memoir of his life.[90] I am aware of the dangers of quoting from memoirs and the possibility of bias in these publications in favour of the subject by admiring biographers and have therefore compared these sources against other accounts. Several contemporary letters and articles were published on anaesthesia in *The Lancet* over that period and form another important resource. Although anaesthesia was not introduced until 1845 and therefore towards the end of my period of study, it was a major event in the history of surgery, and the most relevant I could find to use as a marker of one aspect of the professionalization of surgeons - that of a scientific approach to new discoveries.

The textbooks of surgery which I reviewed provided comprehensive contemporary information on various aspects of the diagnosis and management of surgical illnesses, but minimal details of the surgeon-patient encounter, the experience of the patients or the emotions of the surgeons. For patients' accounts of their perceptions of surgeons during consultations (face-to-face or through the post), and their experiences of painful surgery, I refer to their personal stories found in books, journals, and letters. In particular, I will explore the unique collection of letters held in the archives of the Royal College of Surgeons of England which were written by patients and their families to the celebrated surgeon Sir

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[87] J. Vincent., *Observations on Some Parts of Surgical Practice: to which is Prefixed, An Inquiry into the Claims that Surgery may be Supposed to have for being Classified as a Science,* Longman, Brown & Co, London, 1848, https://archive.org/b28042128/b2804218_djvu.txt,

[88] H. Bigelow, 'Insensibility During Surgical Operations Produced by Inhalation', *Boston Medical Surgical Journal,* 35, (1846), pp. 309-317; T. Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, S. Highley, London, 1848, pp.1-36; J. Miller, *Surgical Experience with Chloroform,* Sutherland & Knox, Edinburgh, 1848, pp.1-60,

[89] J. Snow, *On Chloroform and other Anaesthetics: Their Action and Administration,* John Churchill, London, 1848.

[90] J. Simpson, *Account of a New Anaesthetic Agent, as a Substitute for Sulphuric Ether, in Surgery and Midwifery,* Sutherland and Knox, Edinburgh, & Samuel Highley, London, 1847; J. Duns, *Memoir of Sir James Y.* Simpson*, Bart, (1811-1870),* Edmonton and Douglas, Edinburgh, 1873.

Astley Cooper between 1812 and 1840. For an insight into the personal emotions, feelings and sensibilities of surgeons and their views on the important attributes of surgeons, I will rely on their own writings, lectures, and letters.

The first surgeons to write about the pain associated with surgery, the importance of avoiding unnecessary painful operations, and their efforts to prevent or lessen pain where surgery was considered essential, were the London surgeons William Rowley in 1772, James Moore in 1784, Henry Fearon in 1790, and the Edinburgh surgeon Benjamin Bell in 1788. I have used these primary resources as part of my analysis.[91] I have relied on Benjamin Bell's description of a mastectomy in 1796 for information on how patients (but not all) were bound and blindfolded during surgery.[92] The first surgeons to focus on the feelings of the patient and the importance of humanity and sympathy in the surgeon were the brothers Charles and John Bell in 1800, followed soon after by James Lucas and others.[93]

A search for primary sources on the feelings and emotions of surgeons about inflicting pain on patients during surgery revealed personal testimonies or anecdotes from several surgeons. These ranged from the account by the celebrated surgeon William Cheselden in 1750 to those from various other surgeons up to the year 1848.[94] The correspondence between a surgical student at St Thomas's Hospital, and his surgeon-apothecary father between 1801 and 1802, provided a unique insight into the hospital experience of students and the efforts made to inure them to the sufferings they observed in the operating theatre.[95] However, as I will demonstrate from the stories of other students, not all were able to cope with the pain and suffering they observed.[96]

The information, insight and advice on manners provided by Lord Chesterfield in his correspondence to his son and grandson was crucial to an understanding of manners as a

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[91] W. Rowley, *A Practical Treatise on Diseases of the Breast of Women*, pp. iii-vii, J. Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, pp. 1-7; Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* 1784; B. Bell, *A System of Surgery*: vol 6, 'Of Preventing or Diminishing Pain in Chirurgical Operations', Bell & Bradfute, Edinburgh, 1788. p.437.

[92] B. Bell, *A System of Surgery,* Bell & Bradfute, Edinburgh, 1796, vol 5, p. 177, https://archive.org/details/asystemsurgery04bellgoog. Accessed 11. 04. 2018.

[93] J. Bell, *The Principles of Surgery*, T. Cadell & W. Davies. Edinburgh, 1801, Vol 1, pp. 1-15; Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.99.

[94] W. Cheselden, *The Anatomy of The Human Body*. V11 Edition, London. Printed for C. Hitch & R. Dodsley. London, 1750, pp. 333-334; J. Miller, *Surgical Experience with Chloroform,* Edinburgh, Sutherland & Knox, 1848, p.29.

[95] J. Ford, 'A Medical Student at St Thomas's Hospital, 1801 – 1802, The Weeks Family Letters', *Medical History* Supplement*,* 7, (1987), pp.39-41.

[96] C. Darwin, The Autobiography of Charles Darwin, From the Life and Letters of Charles Darwin, F. Darwin, ed., 3 vols, John Murray, London, 1887; Duns. J, Memoir of Sir James Y. Simpson, Bart, (1811-1870), 1873.

commodity.[97] It was these letters which drew to the public's attention how the use of manners was being abused and hastened the decline in their status, as they were portrayed in courtesy books. I will refer to specific writings of that time in my discussion on the books which provided advice and guidance on courtesy, conduct, etiquette, and ethics. The three individuals, primarily responsible for the development and formalization of medical morality and medical ethics were John Gregory, Thomas Gisborne, and Thomas Percival. I will draw on their writings on morality, standards of behaviour, and the development of codes of medical ethics suitable for the self-regulation of surgeons.[98]

Outline of chapters

Chapter 2 will address the question of how surgical knowledge and skills were taught, learned, practised, expanded, maintained and enhanced. The chapter will commence with an overview of the origins of the different orders of medical practitioners, followed by an account of the formation of surgical corporations and the development of surgical practice in England, Scotland, and Ireland. This will be followed by an account of the expansion of locations for teaching and learning, and the participation of surgeons in the expansion of knowledge and surgical techniques through scientific research and experimentation. Because of the large numbers of apothecaries who practised as surgeon-apothecaries, the development and education of these medical practitioners will be included as an important part of this review.

Chapters 3 and 4 will examine the development of standards of behaviour, medical morality, and ethical codes in relation to surgery and should therefore be taken together. In Chapter 3, I will review the rise and fall of manners as the benchmark of status and personal conduct, and the search for a better way and more sincere way of defining human behaviour. I will explore how this led to the formalization of medical morality and prepared the way for a code of medical ethics. To provide the contextual background, this chapter will include an examination of the nature and standing of the medical profession in the Georgian and early Victorian era.

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[97] *Lord Chesterfield's Letters to his Son and Grandson*, *Selected, with Introduction, Biographical Sketch and Notes,* H. Belfield, ed., Maynard, Merrill, & Co, New York, 1897.

[98] J. Gregory, 1772, *Lectures on the Duties and Qualifications of a Physician,* W. Strahan and T. Cadell, London, 1772, http://books.google.com>books>about>lectures_on_the_D... ; T. Gisborne, *An Enquiry into the Duties of Men in the Higher and Middle Classes of Society in Great Britain, Resulting from their Respective Stations, Professions, and Employments*, vol 2, Ch XII, 'On the Duties of Physicians', B and T. White, London, 1797, pp. 132-198, https://archive.org/details/enquiryintodetails02gisbiala/page/150, accessed during 2017-2020, T. Percival, *Medical Ethics: or a Code of Institutes and Precepts adapted to the Professional Conduct of Physicians and Surgeons*; to *Which is Added, An Appendix; Containing A Discourse on Hospital Duties; also Notes and Illustrations,* J. Johnson, London, 1803, http://archives.org>details, accessed 2017-2020.

In Chapter 4, I will review the development of *Medical Ethics* by Thomas Percival and examine its codes with a focus on those which were of specific relevance to surgeons and surgery. A search will be made for the messages Thomas Percival wished to convey in his *Medical Ethics* to medical practitioners regarding appropriate relationships with their patients, their colleagues, and with hospital administration. A particular focus will be placed on the applicability of these codes to guide the behaviour of surgeons and form a basis for their self-regulation. Whether Percival's codes were to do with ethics or etiquette has been the subject of disagreement between historians and I will address this controversy.

Chapters 5 and 6, will examine whether surgeons demonstrated the attributes of professionalism during their encounters with patients. The focus of Chapter 5 will be on the patients' perceptions of their encounters with surgeons during consultations and surgery. Their opinions will be gathered from an analysis of the personal stories of those who consulted surgeons about their illness and those who underwent surgery prior to the advent of anaesthesia. The findings from these studies will provide important information on the challenges faced in diagnosis and management and provide an insight into the attitudes of surgeons and the relationships which existed between them and their patients at that time.

Chapter 6 will centre on the perspectives of surgeons on their encounters with patients and on their sensibilities, emotions, feelings, and mindset during their interactions with patients in peacetime and in war. The views of contemporary surgeons on inflicting pain during surgery and on its prevention and relief, and their reflections on the desirable attributes of a professional surgeon will be examined through an analysis of their writings and lectures. How well those in training to be surgeons were equipped to handle the distressing demands of their future occupation will be established by reviewing their educational preparation, and their stories based on their experiences.

Chapter 7 will review how far the general body of surgeons embraced new knowledge and adopted a scientific approach to new discoveries consistent with the requirements of a scientific profession. This will be measured by examining the methodology they used in deciding whether to support or reject the use of anaesthesia for painless surgery. These findings will be used as a benchmark of their level of scientific development. One major aspect of these encounters relates to the pain experienced by patients, either directly from their disease, or through its management by surgery or local treatment applications. Before considering the surgeons response to available anaesthesia, I will review the different historical interpretations of pain and whether these perceptions influenced the attitudes of patients and surgeons to pain and its relief.

In Chapter 8, I will bring together the findings from the study of the different fields to provide the evidence to substantiate that by 1858, surgery had become a profession and surgeons demonstrated the features of professionalism. I will explain how this was achieved through learning, experimentation and research, and the embracement of standards of behaviour and ethical codes necessary for satisfactory surgeon-patient encounters. I will also demonstrate the importance of knowing the perceptions of the patients about their surgeons, and the surgeons' own emotions, sensibilities, feelings, and values, in studying the professionalization of surgery.

In this thesis I wish to contribute to the historical knowledge on the professionalization of surgery and surgeons and to how these developments influenced the professional relationships between surgeons and patients. I also wish to add to the scholarship on the emotions and sensibilities of surgeons and the attributes they considered important in the ideal surgeon.

Chapter 2

Professionalization of Surgery through Organization, Education, and Research

Introduction

Between the dissolution of the Barber-Surgeons Company of London in the mid-eighteenth century (1745) and the establishment of the Royal College of Surgeons of England in the mid-nineteenth (1843), surgery developed from a manual craft into a scientific medical discipline, and surgeons transformed themselves from the manual workers of medicine into a professional medical elite. Although the practise of surgery was enabled to progress more rapidly once pain, haemorrhage and infection were overcome, it was the developments that occurred during the period of my study (1745-1858) which transformed the occupation of surgery into a profession.

In Chapter 1, I stated the aims of this thesis were to establish how the occupation of surgery came to encompass the characteristics of a profession and how surgeons came to embrace the attributes of professionalism. I also indicated that I would argue these were achieved through surgeons organizing themselves into corporations and by their focus on learning, enhancing, and maintaining the necessary knowledge and skills. The aims of this chapter are to investigate how the occupation of surgery acquired the characteristics of a profession through organization, education, and research.

In responding to these aims, this chapter will commence with a review of the origins of the different orders of medical practitioners and how they were organized into corporations or associations. I will focus in some detail on the foundation and development of the surgical corporations particularly in England because this will help to explain how the intransigence of some surgical leaders led to delays in the professionalization of surgery. This will be followed by an analysis of the practice of surgery by surgeon-apothecaries and 'pure' surgeons, and the developments which took place in education and training to equip them with the knowledge, skills, and attributes necessary to provide this service. I will then examine the expansion and maintenance of surgical knowledge and skills through the involvement of surgeons in research and experimentation. The chapter will conclude with a review of the methods used by surgeons to improve their public image and that of surgery.

Origins and corporatization of different orders of medical practitioners

In the ancient world, there was no medical 'profession' as we understand it, with its examinations, regulatory bodies, and other characteristics. However, there was an 'ancient occupation of healing' with diverse sorts of healers, each valued according to their

background, status, learning and skills.[1] By the end of the eighteenth-century, British law recognised three orders of medical practitioners, namely physicians, surgeons, and apothecaries, although the tendency was for these practitioners to practise more broadly.[2] This was especially so in non-metropolitan areas and the provinces where the tripartite profession was much less rigidly applied and medical practitioners practised across all areas of medicine.[3]

Each of these orders had its own corporation, method of training, and designated areas of competence. The physicians or practitioners of internal medicine traced their medieval ancestry to learned clerics. There were also learned surgeons in the Middle Ages, but the ordinary rank and file surgeons traced their corporations to guilds of barbers, apothecaries, and grocers. The educated ecclesiastics obtained and preserved for themselves a respectable footing in society as the learned members of the profession. A decision made by the Roman Catholic Church in the 1163 Edict of Tours, prohibited these men from bleeding patients or participating in any procedural or surgical practices where blood might be shed. As a result, those destined to practise as physicians retained their focus on formal education while those intending to practise as surgeons became separated off into a trade. Subsequent Royal Charters from various monarchs enabled the physicians, surgeons, and apothecaries to become formally established as separate groups of practitioners.[4]

Physicians were recognised as the educated elite and knowledgeable about theory in the medical world. They claimed to be the dominant party in the practice of medicine but were increasingly threatened by unregulated practitioners. This led to a group of learned physicians petitioning Henry VIII to be incorporated into a college. Essentially this was an attempt to create an institution which would authorize and control medical practice. This resulted in the award of a Royal Charter in 1518 which established the College of Physicians for the London area. This Charter was affirmed by an Act of Parliament in 1523 which extended the influence of the College to the whole of England.[5]

A subsequent Act of the Parliament of England in 1540 called the 'Physicians Act 1540', gave physicians the right to practise medicine in all its branches including surgery.[6] In principle, the law permitted physicians to prescribe and compound medicines, and to

[1] C. Lawrence, 'Surgery and its Histories: Purposes and Contexts', in T. Schlich, ed., *The Palgrave Handbook of the History of Surgery,* Palgrave Macmillan, Springer, London, 2017, pp.27-48.
[2] Willcock, *The Laws Relating to the Medical Profession,* p.30.
[3] Loudon, *Medical Care and the General Practitioner*, p.24.
[4] Willcock, *The Laws Relating to the Medical* Profession, pp.1-73.
[5] Willcock, *The Laws Relating to the Medical Profession,* p.30.
[6] Willcock, *The Laws Relating to the Medical Profession,* p.32.

perform and to superintend operations in surgery. The 'Physicians Act' and the related Statutes of the College resulted in the legal dominance of the physicians over the surgeons and apothecaries and resulted in major conflicts regarding the autonomy of the latter two groups for centuries. Because the regulations surrounding becoming a licentiate or fellow of the College of Physicians limited their numbers almost entirely to the few medical practitioners who were graduates of the universities of Oxford or Cambridge, these requirements eventually led to the reduction of its influence.

The medieval origins of modern surgery lie elsewhere – in the institutional separation of head and hand. While internal medicine was regarded as a book learned profession and occurred in places of higher learning, the procedural practices or surgery were fostered in the civic world of trades and guilds. Historian Lawrence Conrad has described the important contributions to surgery (as well as to internal medicine) made by Arab-Islamic medicine through compendia, the development of new surgical procedures, suturing materials, advances in medical instrumentation, and descriptive anatomy with anatomical illustrations.[7]

In the medieval period much of manual medical practice, notably bloodletting, was carried out by barbers, and smiths. The barbers, who had previously assisted the physicians in undertaking surgery, and the smiths were called upon by these ecclesiastics and their successors, for help with their sharp and hot instruments. Gradually the barbers extended their practice to include the application of recipes they had collected during their service. Apart from bloodletting, drawing teeth and lancing abscesses, medieval surgeons or craftsmen very occasionally performed operations such as amputations, lithotomy, and trepanation.

The Barber-Surgeons of Dublin were the first to be incorporated by a Royal Charter, which was received in 1446 from Henry VI for the promotion and exercise of the Art of Surgery.[8] In 1506 James IV granted a Charter or Seal of Cause which incorporated the Barbers and Surgeons of Edinburgh, establishing them as the guardians and teachers of surgical practice.[9] In London, the barbers who undertook surgical procedures in addition to barbering, formed one of the guilds or companies of London. A further group who confined their practice to surgery alone formed themselves into the Fellowship of Surgeons in London. These two groups were united in 1540 by An Act of Parliament and the granting of a

[7] L. Conrad, 'The Arab-Islamic Medical Tradition', in L. Conrad, M. Naeve, V. Nutton, R. Porter, A. Weir, eds., *The Western Tradition, 800 B.C. –1800 A.D*, Cambridge University Press, 1995, pp.93-138.
[8] J. Widdess, *The Royal College of Surgeons in Ireland and its Medical School 1784-1984,* 3rd ed, Royal College of Surgeons Publications Department, Dublin, 1984, p.14.
[9] Society of Barbers of Edinburgh Archive, Ref: GB 779 SB1:1722-1846. Royal College of Surgeons of Edinburgh Archives, https://archiveshub.jisc.ac.uk>data>gb 779-sb, Accessed 13 June 2020.

Charter by Henry VIII, to form a trade guild and livery company (not a college) under the name of 'The Mystery and Commonality of Barbers and Surgeons of London', commonly known as the Barber-Surgeons of London.[10] The barber-surgeons of Glasgow were incorporated by James IV in 1599 and referred to as a "Facultie".[11]

The growing role of surgeons in contemporary military campaigns and their greater knowledge of anatomy and increasing application to new learning, including natural history and the experimental sciences such as alchemy or chemistry as it was becoming known, raised their medical and social status and gradually expanded their power. However, those surgeons amongst the Barber-Surgeons of London who wished to expand the science as well as the art of surgery, sought to sever what they perceived to be a restrictive union with the barbers. An Act of Parliament in 1745 dissolved this union and incorporated the surgeons under the commonly known name of The Company of Surgeons of London.[12]

In Edinburgh, the barbers separated from the barber-surgeons in 1772. This was due to their resentment of the favouritism shown by the surgeons to the apothecaries and surgeon-apothecaries. The Edinburgh surgeons obtained a Royal Charter in 1778, which incorporated The Royal College of Surgeons of the City of Edinburgh and recognised the College as a learned and academic corporation. A subsequent Charter in 1851 separated the College from the Town Council and changed its title to The Royal College of Surgeons of Edinburgh.[13]

In Dublin, the surgeons separated from the Barber-Surgeon's guild for the same reasons as the London surgeons, and obtained a Royal Charter which established The Royal College of Surgeons in Ireland in1784. Education was named in its application as one of its primary objectives, and in 1884 the College instituted a medical school as part of its corporation.[14] It was for similar reasons that surgeons separated from the barbers in Berlin in 1725, and in France in 1743.[15] The Academie Nationale de Chirurgie (National Academy of Surgery) was founded in 1731 and replaced the French barber surgeons' guild.

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[10] S. Young, *The Annals of the Barber-Surgeons of London, Compiled from their Records and other Sources, Blades, East & Blades*, London 1890, p.78-81, https://archive.org>details>annalsofbarbersu00youn. Accessed 13 June 2020.

[11] J. Geyer-Kordesch, J. Macdonald, Physicians and Surgeons in Glasgow, *The History of the Royal College of Physicians and Surgeons of Glasgow:1599-1858*, The Hambledon Press, London, 1999.

[12] Willcock, *The Laws Relating to the Medical Profession,* p.60.

[13] H. Dingwall, *A Famous and Flourishing Society: The History of the Royal College of Surgeons of Edinburgh, 1505–2005*, Edinburgh University Press, Edinburgh, 2005, p. 89 & p.145.

[14] Widdess, *The Royal College of Surgeons in Ireland and its Medical School 1784-1984*, pp.14-15.

[15] J. Blandy, J. Lumley, *The Royal College of Surgeons of England: 200 Years of History at the Millennium*, Blackwell Science Ltd, Oxford, p.8.

These actions were the first major statements by groups of surgeons in England, Scotland, Ireland, Germany, and France, that they wished to be recognised as legitimate medical practitioners, committed to the development and teaching of the science and art of surgery. These were also significant milestones in the professionalization of surgery as they marked the beginning of the transformation of the occupation of surgery into a profession. In 1905, the American surgeon William Halsted referred to the founding of the Academy of Surgery in France in 1731 as the 'turning stake in the history of surgery, as the starting line in its scientific labours and of its true career', and this was equally applicable to the founding of the other Colleges or corporations just mentioned.[16]

Although the formation of these corporations signalled the beginning of the professionalization of surgery, their subsequent development and reform was beset by many internal challenges and obstacles, mainly from the members of their own governing bodies. This is best illustrated by the examining the history of the Company of Surgeons of London and of its successor, the Royal College of Surgeons of England. Although the Company of Surgeons was officially governed by the Court of Assistants, for practical purposes its management was in the hands of the Court of Examiners whose ten members were appointed for life. For example, Sir Caesar Hawkins (1711-1786), who was the first surgeon to be made a baronet, served as an examiner for thirty-one years, and the famous London surgeon Percival Pott (1713-1788) served for twenty-nine years. Despite the cause for celebration of its establishment, the Company did not reach the status and influence envisaged, and after an uninspired existence was dissolved in 1797.[17]

So why did this new corporation founded to expand the science and art of surgery fail to achieve its objectives? Having read through every one of the original manuscripts which recorded the monthly minutes of the Company between 1745 and 1797, I believe it can be argued that the members of the Court of Assistants and of the Court of Examiners, many of whom were the founders, had become privileged individuals and lost their original vision. They had become preoccupied with their private patients, fee-paying pupils, and their status in the hospitals, and failed to focus on the education of apprentices, the development of surgery and the broader concerns of Members of the Company.[18]

[16] W. Halsted, 'The Training of the Surgeon', *Bulletin of The Johns Hopkins Hospital,* 15, 162 (1905), pp.267-275.
[17] Minutes of The Company of Surgeons of London, Royal College of Surgeons Library & Archives, COS/1/2, p. 271.
[18] Minutes of The Company of Surgeons of London, COS/1/2.

What is striking from reading these minutes is how much of the Company's deliberations were devoted to seemingly more minor regulatory matters, including imposing fines on surgeons, but failed to make decisions on some of the contentious issues being faced by surgery and surgeons at that time.

My conclusions concur with those of Christopher Lawrence who wrote:

> in the eighteenth century, especially in London, surgeons used the hospitals and private medical schools to make a power base for themselves and created a robust model of surgical individualism as the Company of Surgeons fell into relative decline.[19]

The Company of Surgeons had become little more than an examinations body with many of the characteristics of a London Men's Club. This was highlighted in 1790, when John Gunning then Master of the Company, rebuked the Court of Assistants for its failures in his retiring speech.[20] Gunning outlined the deficiencies of the Company as a lack of proper administration, poor financial accounts, extravagance, and a paucity of educational undertakings. In his speech to the Members of the Court of Assistants, Gunning described the Company's building as having a theatre for lectures, a room for a library, a committee room for the Court, a large room for the reception of Members, and accommodation for the Clerk.

However, he added that:

> how great so ever your intentions were, I am sorry to observe they have been but very ill executed. Your Theatre is without Lectures, your Library Room without Books is converted to an Office for your Clerk, and your Committee Room is become his Eating parlour; and is not always used even in your Common Business & when it is thus made use of, it is seldom in a fit and proper state. Everybody on the least reflection must see & feel a great indecency in all of this.[21]

Gunning said he was sorry to observe that lectures had not been instituted in surgery, or anatomy to any degree of importance, nor the recognition of 'rising merit'. He described the feeble attempts which had been made, 'to be totally inadequate & ineffectual yet have been shamefully expensive.'[22] Gunning's comments provide an important insight into the challenges for those reform-minded surgeons amongst the membership of the Company

[19] Lawrence, 'Democratic, Divine and Heroic', p.20.
[20] Minutes of The Company of Surgeons of London, COS/1/2, pp.208-224; J. South, *Memorials of the Craft of Surgery in England*, Cassell & Company Limited, London, 1886, pp.382-391.
[21] Minutes of The Company of Surgeons of London, COS/1/2, pp.214-215.
[22] Minutes of The Company of Surgeons of London, COS/1/2, p.217.

who were striving to raise the general standard of the teaching, learning, research, and the practise of surgery. It would appear these surgeons were without the overall support and commitment of many of the surgeons in the leadership of the Company.

In 1797 the Company moved to new premises in Lincoln's Inn Fields, but by then it had lost the support of many of its rank-and-file Members. The dissolution of the Company in November 1797 was based on irregularities caused by the flagrant disregard for the By-laws of the Company by the Court of Assistants in May 1796, and which were in breach of the Act of 1745. The catalyst for change was given further impetus when it transpired after the death of the surgeon John Hunter in 1793 , that his collection of specimens, dissections and notes had been purchased by the government and would be transferred to the Company of Surgeons in 1799 'for the benefit of science and the advantage of the Company', with a stipulation that it build a museum to house the collection.[23] This gesture helped to expedite the 'long-awaited reforms and the transformation of the Company into a College.'[24] A new Charter was granted by George III in 1800 leading to the formation of the Royal College of Surgeons of London.[25] Members of the former Company were invited to become Members of the new College and over one thousand did so, each receiving the new postnominal MRCS.[26]

Following the establishment of the Royal College of Surgeons of London in 1800, membership began to increase due to the number of surgeon-apothecaries who chose to take the examination for Membership. Despite the enthusiasm which accompanied this new beginning, further progress was slow and broad educational courses were not offered for several years. Agitation for reform continued and in 1823, a revision of the London-centric requirements for education and training, which had hitherto denigrated the surgical experience and education provided by the non-metropolitan surgeons, was approved. However, the Council of the College failed to listen to requests from its younger Members for greater reform, and the Council's 'own sins of omission and commission' led to further attacks on the College.[27]

A new set of 'Regulations Respecting the Professional Education of Candidates for the Diploma' was agreed to by the College in 1829 and published in *The Lancet*.[28] However,

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[23] Z. Cope, *The History of the Royal College of Surgeons of England*, Anthony Blond, 1959, p.22.

[24] Blandy, Lumley, *The Royal College of Surgeons of England,* p. 16.

[25] Willcock, *The Laws Relating to the Medical Profession*, p. 64; Z. Cope, *The History of The Royal College of Surgeons of England*, pp. 19-21.

[26] Blandy, Lumley, *The Royal College of Surgeons of England,* p.18.

[27] Cope, *The History of the Royal College of Surgeons of England*, p.42.

[28] 'Royal College of Surgeons of London, Regulations Respecting the Professional Education of Candidates for the Diploma', *The Lancet,* 1, 1829, pp.217-218.

Thomas Wakley, the London surgeon and founder and editor of *The Lancet*, wrote in his covering editorial, 'these regulations are to disarm all hostility towards the College and are to prove a death-blow to the cause of surgical reform.'[29] Wakley's focus was on improving the standard of surgical care and education, and he became the rallying point for the large number of surgeons including surgeon-apothecaries, who felt ignored and disenfranchised by the College leadership. Failing to achieve their aims, Members of the College made a direct petition to Parliament to enquire into the governance of the College. This led to critical information being sought about its management, financial affairs, and educational activities. Parliament already had an interest in the affairs of the College as it had previously granted a total of 42,000 pounds towards the cost of the Hunterian Collection and the building of the College. The questions put to the College during the enquiry by Parliament and the resulting findings were to prove highly embarrassing to the College's leadership and signalled the necessity of urgent reform.

A working party comprised of six leading London surgeons and chaired by Sir Astley Cooper was set up in 1832 to consider the state of the College and the role of its members. Their report produced several radical proposals all of which were rejected by the Council. Cooper was re-elected as President of the College Council in 1836 and immediately set about introducing a new examination which those surgeons who lectured in anatomy, physiology, pathology or surgery in England had to acquire. A new Charter was granted in 1843, which changed the name of the College to The Royal College of Surgeons of England, thereby officially extending its remit to the whole of England. The required standards of education and training were thereby raised, and a new and higher-level examination established. This was referred to as the Fellowship of the Royal College of Surgeons of England (FRCS). This examination soon became a requirement for those surgeons who planned to confine their practice to surgery, sought appointments in the hospitals, or wished to become teachers for the College.[30] Although the College was to remain primarily an examination body for over a century, important reform had begun, and a further milestone was established in the professionalization of surgery and its wider recognition as a skilful and learned profession.[31]

The development of surgery as a profession in Scotland by the Royal Colleges in Edinburgh and Glasgow, and in Ireland by the Royal Colleges of Surgeons in Ireland, progressed along similar lines but without the level of agitation and activism that had taken place in England. The recommendation by the Leeds surgeon James Lucas in 1800, that all

[29] 'Royal College of Surgeons of London', *The Lancet,* 1, 1829, pp.218-220.
[30] G. Millerson, *The Qualifying Associations,* 1964.
[31] Cope, *The History of the Royal College of Surgeons of England,* pp.57-59.

those wishing to become surgeons in Britain should first undertake training and obtain a qualification in surgery before being allowed to practise in this discipline, was finally being achieved.[32]

The obstinacy to reform by Members of the Courts of Assistants and Examiners of the Company of Surgeons, and later of the Council and the Examiners of the Royal College of Surgeons of London was mostly related to status and remuneration. These men who were self-made individuals with appointments at the major London teaching hospitals, saw themselves at the forefront of professional improvement and progress and in control of the surgical corporations. In the medical entrepreneurship of the period, part of their claim for status and remuneration in the competitive marketplace for patients and in attracting fee paying surgical students, rested on their visible leadership roles in these corporations and their hospital attachments. Nepotism was rife and those demitting councillors or examiners who had tenure for life, were replaced mostly by close clinical colleagues or relatives without election, thereby ensuring a self-perpetuating cabal which worked against reforms.

Candidates for Membership were required to attend lectures for which they paid a fee, but only those lectures given by Council members were initially approved. This self-serving policy ignored and rejected the education, training and experience ably provided by those other Members of the College who were practising surgery in London and elsewhere. Furthermore, the ruling that the grand porticoed front entrance to the College was reserved for councillors and examiners, while all other Members were required to go through the back door, ranked greatly with the wider Membership.[33] Thomas Wakley criticised the 'twenty-one self-appointed, self-perpetuating gentlemen' of the Council in 1842 for their failure to listen to and promote the interests of the 'long suffering' members of the College. In comparison to other equivalent responsible bodies which he named; he wrote that:

> the Council of the London College of Surgeons remains an irresponsible, unreformed monstrosity in the midst of English institutions – an antediluvian relic, in human institutions, of all that is most despotic and revolting, iniquitous and insulting, on the face of the earth.[34]

Wakley's vitriolic criticisms over many years fanned the flames of discontent and undoubtedly expedited the widespread reforms which were finally implemented from 1843 onwards.

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[32] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary*, p.12,
[33] Blandy, Lumley, *The Royal College of Surgeons of England*, p.19.
[34] T. Wakley, 'The College Conversazioni', *The Lancet*, 2, (1842), pp.245-246.

The largest group of licensed medical practitioners or the apothecaries, originated as grocers who collected provisions for culinary and medicinal purposes and later began to manufacture and sell medicines based on prescriptions mainly from the physicians. They eventually formed themselves into one of the ancient companies of the City of London and agitated to break away from the Grocers Company, and to reduce the overriding authority and power of supervision of the Royal College of Physicians of London. In 1617, James I granted the Apothecaries their Charter of Incorporation which enabled them to separate from the Grocers Company. It extended their role and formalised their training, including the requirement of a seven-year apprenticeship and an examination.[35]

Apothecaries began to provide advice to patients by way of consultation and prescribed the medicines which they manufactured and sold. The Royal College of Physicians of London objected to this practice in what is known as the Rose Case, but the House of Lords considered it appropriate for the Apothecaries to do so in 1704. This decision gave legal sanction to the apothecaries' right to practise medicine, and in so doing they became the forerunners of general practitioners.[36] In his book *Medical Care and The General Practitioner:1750-1850*, medical historian Irvine Loudon cited the following comment made by the London medical practitioner Jeremiah Jenkins in 1810:

> the apothecary of this country is qualified by education to attend at the bedside of the sick and being in general better acquainted with pharmacy than the physicians of English Universities … is often the most successful practitioner.[37]

From the middle of the eighteenth century, apothecaries referred to as surgeon-apothecaries took on an increasing role in treating the sick, performing surgical procedures and delivering babies. The distribution of the different orders of medical practitioners in provincial England in the late eighteenth century can be seen in the Medical Register for the year 1783. This showed that surgeon-apothecaries made up 82.3%, apothecaries 3.3%, physicians 11.4 %, and 'pure' surgeons 2.8%.[38] In other words, 85.6% of all practising provincial medical practitioners were either surgeon-apothecaries or apothecaries.

In 1795, medical writer, reformer and previous surgeon-apothecary John Mason Good, observed that 'there are few apothecaries in the country who do not engage in the

[35] Willcock, *The Laws Relating to the Medical Profession,* pp. ccxxx.
[36] P. Hunting, *A History of the Society of Apothecaries*, Society of Apothecaries, London, 1998, p.55.
[37] Loudon, *Medical Care and The General Practitioner,* p.25; J. Jenkins, *Observations on the Present State of the Profession and Trade of Medicine as Practiced by Physicians, Surgeons, Apothecaries, Druggists, and Quacks in this Metropolis and Throughout the Country of Great Britain*, 8 vols, London, 1810.
[38] J. Lane, 'The Medical Practitioners of Provincial England', *Medical History*, 28, 4 (1984), pp,353-71.

practice of surgery and by far the greatest number in London do the same.'[39] In 1800, the London surgeon-apothecary James Parkinson stated that those training to be medical practitioners 'must exclude from all thoughts of exercising, either the practice of physic or of surgery alone', unless they had the private financial means to do so.[40] This was primarily a financial consideration and explains why most medical practitioners then practised as surgeon-apothecaries. The few who practised specifically as surgeons or physicians, did so in the large cities where they invariably had a hospital appointment.

These practitioners were not the only providers of medical advice and treatment for the public. A survey of 'health practitioners' in Lancashire in 1806 showed that graduate physicians made up 2% of all healers; surgeons and apothecaries were 9%; druggists were 16%, and irregular practitioners and midwives 73% of all those in practice. The author of this article concluded that:

> physicians without degrees, … surgeons and apothecaries without instruction, and apothecaries and druggists without having served an apprenticeship, have intruded themselves … into almost every market town in England.[41]

These figures show the variable backgrounds of those who competed to provide medical and surgical services to the sick across England.

By the early nineteenth century, the provision of surgical and medical services had begun to change, particularly in the large cities. The celebrated English surgeon Sir William Lawrence (1783-1867) told his students in 1830 that in the great majority of instances medicine and surgery were both practised by one set of persons - the surgeon-apothecaries, and that nineteen-twentieths of disease were under their care.[42] He added that in the metropolis and some large towns on the other hand, these were practised by two different classes of persons, taught in separate courses by different teachers, with their regulation intrusted by law to two distinct public bodies, namely the Royal College of Physicians of London and the Royal College of Surgeons of London.[43]

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[39] J. Good, op. cit., Appendix L, p.10; John Mason Good, The History of Medicine, so far as it relates to the Profession of the Apothecary, 1795, p.146-47, Cited by SWF. Holloway; *The Apothecaries Act 1815: A Reinterpretation, Part 1: The Origins of the Act. 1966*, p.108, http://www.ncbi.nim.nih.gov>pdf>medhis00151-0005. Accessed 27 May 2020.

[40] J. Parkinson, *The Hospital Pupil; or an Essay Intended to Facilitate the Study of Medicine and Surgery in Four Letters,* H. D, Symonds, 1800, p.26, http://archive.org>details>TheHospitalPupil, Accessed 2017-2020.

[41] E. Harrison, *Remarks on the Ineffective State of the Practice of Physic in Great Britain, with Proposals for its Future Regulation and Improvements,* R. Bickerstaff, London, 1806, pp. 1-2, pp.38-39, http://wellcomecollection.org>works>nepzetfx, accessed 2017-2018.

[42] W. Lawrence, 'Lectures on Surgery, Medical and Operative, Lecture 1, Introduction', *The Lancet,* 1, (1829-1830), pp.32-42, http://archive.org>details>biographicalhis00wilk, accessed June 2018.

[43] Lawrence, 'Lectures on Surgery.

The practice of surgery by surgeon-apothecaries and 'pure' surgeons

Historically, consultations usually took place in the patient's home, the surgeon-apothecary's shops or in the private residence of a 'pure' surgeon. The poor were seen in the apothecaries' shops mostly by apprentices, while the gentry had consultations mainly in their own homes. Surgical procedures were few and performed on the more well off in their private homes, or in some form of modest private facility or the surgeon's residence. For the poor, limited procedures were undertaken mainly at the surgeon-apothecary's shop or occasionally in their homes.[44]

The beginning of the eighteenth-century saw the building of hospitals by public subscription. Thomas Guy endowed the building that became known as Guy's Hospital and opened in 1725.[45] By the middle of the eighteenth-century hospitals or infirmaries were being established in the larger cities and towns of Britain by individuals and voluntary associations and funded by subscribers from the community. One typical example was Manchester Infirmary. Founded in 1752, it expanded to include a dispensary, lunatic asylum and isolation or fever hospital. A lock hospital for those with venereal disease, and a lying-in-hospital for women giving birth were added later.[46] Outpatients were seen in dispensaries which were funded and administered on a similar basis to the voluntary hospitals. Hospitals and infirmaries were governed by a group of trustees, each of whom was elected on the payment of an average annual sum of two guineas. Honorary surgeons and physicians served these institutions in an unpaid capacity. For a person to be admitted to one of these institutions, they first had to be recommended by one of the subscribers to the hospital and who frequently was also their employer.[47]

Surgeons and physicians were keen to be appointed to the staff of such hospitals as this provided them with opportunities to practise surgery and medicine. Furthermore, these appointments were regarded as a mark of skill, experience and social standing, and those who held such posts were looked upon with favour by wealthier patients.[48] In addition, the provision of free services was visible to the public and helped these practitioners to become recognised and established in the more desirable areas and better circles of a city. A further

[44] Loudon, *Medical Care and the General Practitioner,* p.74.
[45] Lawrence, 'Lectures on Surgery, pp.32-42., p.76,
[46] F. Renaud, *A Short History of the Rise and Progress of the Manchester Infirmary*, 1752-1877, J.E. Cornish, Manchester, 1898, p. 13, https://archive.org>details. Accessed 2017-2019.
[47] J. Pickstone, *Medicine and Industrial Society: A History of Hospital Development in Manchester and its Regions,* 1752-1946, Manchester University Press, Manchester, 1985, p.3.
[48] Pickstone, *Medicine and Industrial Society,* p.12.

incentive was those surgeons with hospital appointments attracted larger numbers of fee-paying pupils.[49]

The establishment of hospitals and dispensaries helped to expand surgical and medical services for the community over the following century. By the mid-nineteenth century, these facilities and the establishment of a formal channel of medical relief through the agency of the New Poor Law, and the setting up of a network of friendly societies, 'gave the poor and labouring classes more access to medical treatment than they had ever had before'.[50] However, the Poor Law Amendment Act 1834 made 'no provision for the sick or those suffering from various diseases.'[51] Although this is a complex subject, it seems unlikely this Act led at first to a significant increase in surgical services. However, the establishment of Poor Law Infirmaries significantly increased in-patient care later in the nineteenth century. The development of new forms of practice in these hospitals by poor-law contracted surgeons played a role in the change in surgery from a shop-based trade to a hospital-based profession.

Although the greater knowledge of anatomy by surgeons in the eighteenth century enabled them to operate with more precision, major surgery was infrequently performed. A review of the activities of surgeon-apothecaries reveals that most of their time was occupied in consulting, prescribing, and dealing with non-surgical problems. Bloodletting, drawing teeth, delivering babies in difficult labours, managing skin and eye infections, lancing abscesses, trussing ruptures, dressing wounds, and dealing with injuries associated with horses, farming, machinery, fights, burns or falls and managing venereal disease, were the most common activities.[52] Very occasionally, more major procedures including hernia reduction, testicular surgery, breast surgery, trephining, lithotomy, and amputations might be undertaken. In the provincial and rural areas, these surgeon-apothecaries were usually the only available source of surgical care.

Those referred to as 'pure surgeons' were said to practice 'pure' surgery. According to Stanley, this term 'distinguished between those who were prepared to cut in healing, irrespective that they also prescribed, and those who declined to cut as well as prescribing.'[53] However, as Stanley pointed out, the 'term "pure surgeon" concealed a

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[49] A. Digby, *Making a Medical Living: Doctors and Patients in the English Market for Medicine*, 1720-1911, Cambridge University Press, Cambridge, 1994, p.137.
[50] H. Marland, 'The Medical Activities of Mid-Nineteenth-Century Chemists and Druggists, with Special Reference to Wakefield and Huddersfield', *Medical History*, 31, (1987), pp.415-39.
[51] J. Theobald-Russell. 'An Analysis of the English Poor Law Amendment Act of 1834', MA Thesis, Drake University, 1960, p.125. https://core.ac.uk.download/pdf/46925810.pdf Accessed 3 January 2019.
[52] Porter, 'The Eighteenth Century', pp.434-435.
[53] Stanley, *For Fear of Pain British Surgery,1790-1850,* pp.29-30.

paradox, … as all conceded, surgery did not involve merely operative skill', and the so-called surgeons therefore practised medicine as well as surgery.[54] Most of their work was still that of consulting and advising patients, but with more frequent minor and occasional major surgical procedures being undertaken. A review of the surgical cases admitted to Nottingham Hospital between 1795 and 1797 demonstrated most of a 'pure' surgeon's practice was one of dealing with minor surgical problems.[55] As was the case with surgeon-apothecaries, these surgeons would advise on wounds, ulcers, fractures, dislocations, venereal disease, tumours, hernia, and bladder stones. In addition, these 'pure' surgeons occasionally performed more major operations such as amputations, cutting for bladder stones and mastectomy. The frequency and extent of surgical procedures, especially on soft tissues, blood vessels and joints (largely a French development) continued to expand in the late eighteenth and early nineteenth centuries, even before the introduction of anaesthesia in 1846.[56]

Patients were conscious and usually blindfolded and restrained during surgical procedures. Occasionally, some declined to be blindfolded or restrained and some examples will be provided in Chapter 5. Although there are some historical sketches of patients bound during surgery, the details are rarely provided in primary sources. The only description I could find was provided in 1796 by the Edinburgh surgeon Benjamin Bell. In his description of a mastectomy, Bell explained how the patient must be either firmly seated in an armchair, whilst her arms were secured by two assistant, or placed upon a table, where she could be more easily secured and fainting was less likely to occur.[57]

Amputations of limbs were performed because few serious injuries, wounds or diseases of the limbs were cured by local applications and drugs. Stones in the bladder was then a common condition in the community and because of the pain and dangers of infection which accompanied these stones, surgery or lithotomy was frequently required despite the enormity of the surgery and the risks involved. In the hands of a dextrous and swift surgeon such as William Cheselden, (1688-1752), surgery was highly successful, but few could match his dexterity, speed, and results.[58]

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[54] Stanley, *For Fear of Pain British Surgery,1790-1850,* pp.29-30.
[55] Loudon, *Medical Care and the General Practitioner,* p.75.
[56] B. Jackson, 'The Painless Scalpel', *The History of Anaesthesia Society Proceedings,* 20, (1997), pp.28-35. www.histansoc.org.uk.proceedings.html. Accessed 16.10.2018.
[57] B. Bell, *A System of Surgery,* Bell & Bradfute, Edinburgh, 1796, vol 5, p. 177. https://archive.org/details/asystemsurgery04bellgoog. Accessed 11. 04. 2018.
[58] Payne, *With Words and Knives,* p. 88.

Historical developments in the education and training of surgeons

The aims of a modern surgical education and training programme is to produce fully fledged surgeons with the right personality, attitudes and skills, able to function independently or as part of a multidisciplinary team.[59] Although a formalised practical and scientific training programme for surgeons did not commence until the1860s when it was first introduced in Berlin by the prominent German surgeon Bernard von Langenbach, those planning to practise as surgeons have always undergone some form of preparatory training.[60] With the exception of the small number who studied at universities and usually became physicians, the defining educational experience for most medical practitioners in Britain was the apprenticeship.[61] By the middle of the eighteenth century, boys as young as fourteen undertook an apprenticeship of five to seven years with an experienced medical practitioner and lived in their master's residence where he acted as their loco parentis. A certified contract outlined the education they were to receive, and the financial cost varied from fifty to two hundred pounds or more, depending on the reputation of the master and on whether he had a hospital appointment.

These arrangements began to change in the latter years of the eighteenth century because of the 'turbulent yet creative time in the history of medical study.'[62] The long-standing and stable practice of physicians relying entirely on a university education and of surgeons and apothecaries relying solely on serving an apprenticeship had begun to change. Familiar landmarks in medicine began to disappear with the rapidly expanding role of hospitals, private teaching, and the establishment of schools of medicine. New concepts on medical training were becoming popular. Historian and educationalist Thomas Bonner claimed some of these changes in medical education 'were a reflection of the general transformation of European society, education, and politics.'[63] The Enlightenment brought a new concern for people's health, and the scientific revolution with its focus on research and experimentation, changed the ways in which illness and its management was perceived.

In addition to the influence of these external forces, the existing apprenticeship arrangements for learning became insufficient for the needs of the expanding medical workforce and the marketplace apprentices were about to enter. These factors were

[59] J. Collins, I. Gough, I. Civil, R. Stitz, 'A New Surgical Education and Training Programme', *Australian and New Zealand Journal of Surgery,* 77, (2007), pp.497-501.
[60] J. Collins, 'Surgical Education and Training: Historical Perspectives**',** in D. Nestel, G. Reedy, L. McKenna, S. Gough, eds., *Clinical Education for the Health Professions: Theory and Practice*, Springer Nature Singapore Pte Ltd, 2021.
[61] Bonner, *Becoming a Physician,* p.44.
[62] Bonner, *Becoming a Physician,* p.12.
[63] Bonner, *Becoming a Physician,* p.12.

accentuated by the growing dissatisfaction amongst apprentices regarding the variable level of their teaching and the lack of direct contact with patients until late in their apprenticeship. There were few opportunities to learn anatomy and the new and evolving subjects then becoming important for future medical practice. As the second half of the eighteenth century progressed, students were becoming more and more masters of their own learning. In addition to selecting apprenticeships with practitioners whose practice focus was like that of their own career aspirations, they began to seek new educational opportunities.

The development and expansion of hospitals and the transformation of their purpose into places of teaching as well as healing and research, provided new locations for learning outside the traditional apprenticeships and the universities. Apprentices began to supplement their education by undertaking a period 'walking the wards' of a hospital and through learning first-hand about different diseases and their management. They also benefitted themselves by observing surgical operations, acting as dressers, assisting surgeons, dressing wounds, reducing fractures, and performing minor surgery under the supervision of a surgeon. The celebrated London surgeon Benjamin Brodie (1783-1862) advised his students that the only place to learn surgery was at the bedside of patients on the wards of a hospital. Brodie explained this was because:

> you can use your hands and your eyes, where you can see the appearance and learn the other symptoms of disease, where you can make enquiries of the patients themselves relative to the history of their complaint and ascertain by your own observation the comparative success of the various modes of treatment adopted.[64]

One example of the arrangements for students in hospitals was provided in a review of the teaching at Guy's and St Thomas's Hospitals in London between 1740 and 1790 by the prestigious surgeon John Warner (1717-1801). Warner's review followed a dispute between both he and John Gunning with the surgeon John Hunter (1728-1793) over Hunter's wish to increase opportunities for students to learn in hospitals. The findings from Warner's review were written in 1792 in the form of a letter to his colleague John Gunning and were included in a subsequent biographical history of Guy's Hospital published in 1892.[65] According to Warner:

> the chief hospital teaching and lectures were designed to make and educate surgeons. Medicine was but little taught, and that little was intended for the general

[64] B. Brodie, 'Introductory Lecture of Anatomy and Physiology', October 1820, f.20, Royal College of Surgeons of England Library, MS0470/1/2/5; 'Introductory Lecture', *The Lancet*, 3, 54 (1824), p.23.
[65] S. Wilks, G. Bettany, *A Biographical History of Guy's Hospital*, Ward, Lock, Bowden & Co, London, 1892, pp.88-89.

> practitioner – then called apothecary, … for he [the physician] was compelled to resort to other places for the doctor's degree.[66]

Warner's comment that the education provided by the hospital between 1740 and 1790 was specifically for surgeons and surgeon-apothecaries reflects the fact that most physicians during that period were educated predominantly at a university. By the latter part of the eighteenth century this had changed as university students had already begun to supplement their university-based education with hands-on experience in the hospitals.

Warner described three classes of hospital learners, namely apprentices, dressers, and pupils. Each surgeon was allowed four pupils and four others made up of dressers and apprentices. The money received from the apprentices and dressers was the sole property of the surgeons to whom they were attached, whilst that from the pupils was divided equally between the surgeons and apothecaries at the hospital. The apprentices and dressers acted as assistants to the surgeons to whom they were attached, with the apprentices bound to the surgeon for a variable term of years. The dressers were attached for a shorter period as they had already served part of their apprenticeships elsewhere.[67] The pupils, who had completed their apprenticeship, were entitled to attend all operations, and visit the wards, but in an observer capacity.[68] In this way the hospitals made a significant contribution to the education of surgeons and the development of surgery.

A designated area of the newly founded hospitals was reserved for surgical procedures and considered out of bounds to all but those involved in performing and observing operations. Surgeons cultivated a certain mystique around these locations, some of which were large and modelled after the earlier continental anatomy theatres with tiers of seats and referred to as amphitheatres. These areas became a location for demonstrating surgical dexterity, showmanship, and performance, and were appropriately named the operating 'theatre' like other similar places of performance. They were of course the site of great suffering and pain and it was the activities and behaviour of the surgeons in these operating theatres that shaped much of the contemporary public image of surgeons and surgery.

An interesting insight into the environment of an operating theatre in the early nineteenth century was provided in the form of a short story by the Scottish physician and essayist John Brown. In 1830 while Brown was a medical student and clerk at Minto Hospital in Edinburgh, he became involved in the care of a woman who had a mastectomy performed

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[66] Wilks, Bettany, *A Biographical History of Guy's Hospital,* pp.86-87.
[67] Wilks, Bettany, *A Biographical History of Guy's Hospital,* pp.88-89.
[68] Wall, *The History of the Surgeon's Company,* pp.82-84.

by the Scottish surgeon James Syme, prior to the introduction of anaesthesia. In his short story named 'Rab and his Friends', which will be discussed in greater depth in Chapter 5, Brown described the eager students rushing up the stairs to the operating theatre 'eager to secure good places', [and] 'full of interest and talk.'[69] He explained how the patient walked in accompanied by her husband and their dog and placed herself on the operating table. He describes how 'one look at her quiets and abates the eager students', and that during her painful surgery, 'the students – all of us – wept like children.'[70] Brown believed that by observing what was taking place, pity was quickened in the students and provided them with a life-long meaning from this experience. This is in keeping with the moral sense theory proposed by the Scottish philosopher David Hume (1711-1776), that a feeling of sympathy is generated by observing another person's suffering as I will further discuss in Chapter 3.

The operating theatre was to become an important place in each hospital and to play a key role in the growing status of surgeons and surgery. By the end of my study period in 1850, the London surgeon Frederic Skey described this location as a 'place of weekly resort, the "high change" of the institution, at which we find united the largest assembly of professors, of students, and their friends.'[71] The operating theatre complex had become a place of learning as well as one of service and an important meeting place for surgeons to discuss complex cases with each other and with the physicians. This development was an important part of the transformation of surgeons and surgery into a professional discipline.

In addition to the scope of experience provided by the expanding hospitals, facilities were soon added to these institutions for students to learn anatomy including through the dissection of cadavers, and to attend lectures in surgery, medicine, physiology, midwifery and other new and expanding subjects. These facilities were developed predominantly by surgeons who also carried out most of the teaching and many of these institutions went on to become important medical schools in London and the provinces. However, the arrangements for apprenticeships at some of the London hospitals were not without their critics. One anonymous medical practitioner wrote to *The Lancet* in 1824 that the cost of 500 guineas for an apprenticeship to a hospital surgeon limited such opportunities to those whose parents could afford to pay this large fee. Furthermore, he claimed the motivations of these parents was an expectation of their son's subsequent appointment to the staff that hospital, thereby limiting such prospects for others. This correspondent also referred to the

[69]Brown, *Rab and his Friends,* pp.39-42.
[70]Brown, *Rab and his Friends,* pp.39-42
[71]Skey, *Operative Surgery,* p. ix.

absence of formal teaching and the students having to fend for themselves 'as a wild colt is turned to grass.'[72]

Independent private facilities for learning anatomy and other subjects were also established to cater for the growing population of medical students. The most prestigious was the Great Windmill Street School in London which was founded in 1768 by the noted Scottish anatomist, physician, obstetrician, and teacher William Hunter (1718 -1783). This was partly to fill the vacuum in the teaching of anatomy left by the failure of the Company of Surgeons. Here, he and his brother John offered students instruction in anatomy and opportunities for cadaver dissection. They also provided lectures in surgery, physiology, pathology, midwifery, and diseases of women and children.[73]

The early universities in Britain were indifferent to the needs of higher medical education unlike some of the countries on the Continent of Europe. In England, the established Universities of Oxford and Cambridge were expensive, and entry was restricted mainly to members of the Anglican religion. Few medical practitioners graduated from these two universities during the eighteenth century and those who did were usually destined to practise as physicians. Following the establishment of medical schools in Scotland at the University of Edinburgh in 1726 and the University of Glasgow in 1751, new and more accessible opportunities for a university-based medical education became available including to a broader socioeconomic class of students. The secular University of Edinburgh in particular, became popular with students from the United Kingdom and the English-speaking world. These two universities provided a full range of courses, including medicine, surgery and midwifery and practical work, as well as opportunities to learn in the hospitals. This reflected the evolving changes in medical education from undertaking an apprenticeship in the community or obtaining a degree at a university, to hospital-based hands-on learning, and eventually a combination of university and hospital education. Between the years 1750 and 1800, the combined Scottish Universities of Edinburgh and Glasgow graduated 2600 medical practitioners.[74] During the same period, the amalgamated number who graduated from Oxford and Cambridge, was only 246 or an average of five per year.[75]

[72] 'Letter to the Editor', *The Lancet,* August 28, (1824), p.275.
[73] S. Thompson, 'The Great Windmill Street School', *Bulletin of the History of Medicine*, 12, (1942), pp.383-85.
[74] K. Calman, *Medical Education: Past, Present and Future: Handing on Learning*, Churchill Livingstone Elsevier, Edinburgh, 2007, pp.150-151.
[75] A. Robb-Smith, 'Medical Education at Oxford and Cambridge Prior to 1850', in F. Pointer, ed., *The Evolution of Medical Education in Britain,* Pitman, London, 1966, p.49.

However, it should be noted that despite the large numbers of medical students milling around in Edinburgh in 1805, only 21% of them took the MD degree.[76] This may have been due to a combination of the then perceived loss of status of the Edinburgh medical degree amongst the students, dissatisfaction with their teaching, or the alternative opportunities to complete their education in universities like Leiden. It was in Leiden that the Dutch physician Herman Boerhaave had earlier established his celebrated form of clinical teaching, and whose ongoing legacy accounted for Leiden's popularity amongst students.

By 1800, surgical students were seeking opportunities which would best equip them for their future practice, and which by then university professors frequently were unable to provide.[77] Furthermore, the form of anatomy being taught by the surgeons had become radically different from that by the universities. One of the reasons for this was the discovery by French surgeons when performing post-mortems in the late eighteenth century, that many internal disorders were due to local pathological changes in the same way as external disorders. Moreover, these disorders could be managed by them, rather than by the physicians as was previously practised.[78] This led surgeons to dismantle the old anatomy and recreate it into a more surgically focused subject, including emphasis on the anatomical relationships between organs and structures so essential for surgeons to operate with speed and dexterity. They also demonstrated that anatomy was best learned by individual students performing dissection, rather than through demonstration by their teachers.[79]

Similarly, the emerging generation of surgeons who were campaigning for science-based surgery, began to shape the newly established disciplines of physiology, pathology and clinical surgery along their interests which were 'cognitively quite different from the traditional bodies of knowledge over which university professors presided.'[80] This led to a multitude of extramural surgical teachers offering popular alternative courses to the universities in private facilities as well as at the Royal Colleges of Surgeons in London, Edinburgh and Dublin. A mixed pattern of medical education and training therefore emerged, and students could avail from a combination of learning opportunities depending on their financial circumstances and career aspirations. The increasing focus on practical medical education as opposed to book learning had already led university medical students to spend part of their time 'walking the wards' of major hospitals in search of 'hands on' experience.

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[76] C. Lawrence, 'The Edinburgh Medical School and the End of the 'Old Thing' 1790-1830', in L. Brockliss, ed., *History of Universities Series,* 1988, vol 7, p.263.
[77] Lawrence, 'The Edinburgh Medical School and the End of the 'Old Thing' 1790-1830', p.262.
[78] O. Temkin, 'The Role of Surgery in the Rise of Modern Medical Thought', *Bulletin of the History of Medicine,* 25, (1951), pp.248-259.
[79] Lawrence, 'The Edinburgh Medical School and the End of the 'Old Thing' 1790-1830', pp.265-266.
[80] Lawrence, 'The Edinburgh Medical School and the End of the 'Old Thing' 1790-1830', pp.265-266.

Concerns that anatomy dominated the medical curriculum at the expense of other subjects like physiology began to be expressed. One source wrote that it was as if a knowledge of 'anatomy of the dead body was the sole foundation of medical study, whereas it is a knowledge of the living body which constitutes that foundation.'[81] Physiology was then beginning to be regarded as the real foundation of medical knowledge and therefore more important in medical student's attention. The dominance of anatomy was in part a reflection of the standing that a thorough knowledge of this subject gave to medical practitioners thereby helping to differentiate themselves from other groups of healers.

In his comprehensive description of the education of surgeons, the Leeds surgeon James Lucas wrote in 1800 that reformation in surgical practice would most likely accrue from 'a strict regard being paid to regularity in the education and qualifications of young men before they commence practice.'[82] It does not appear that there was a defined list of requirements or a clear process for selection into surgical education and training as was later to occur.[83] Lucas added that surgeons must know about drugs and pay a strict attention to chemistry. Calling for a broader base of knowledge, he advised the study of the theory and practice of surgery and medicine, explaining that 'those who are intended for surgeons, are more than medical practitioners, concerned in a minute knowledge of the external, as well as the internal constitution of the human fabric.'[84]

In his introductory lecture to over 400 students on 1 October 1823, the famous London surgeon Sir Astley Cooper (1768-1841) reminded them of the importance to the surgeon of learning both medicine and surgery. He explained why a surgeon must understand the origin of local disease and its great influence on the constitution, and of being able to prescribe with certainty, for without 'such knowledge he knows but half his duty.'[85] This was reinforced by the London surgeon Sir William Lawrence in 1830, when he highlighted the importance of a surgeon knowing about the local as well as the general treatment of a disease. He stated that a surgeon who is 'ignorant of the latter, is incompetent to the duties of the profession.'[86] Although Lawrence, like other contemporary surgeons, strongly supported the importance of

[70] 'Introductory Essay Comprising an Account of the Origin of the Association of the Apothecaries and Surgeon-Apothecaries, and of their Objects', *Transactions of the Associated Apothecaries of England and Wales*, London, Vol 1. 1823, p. ciii-civ, https://wellcomecollection.org/works/qmr9jh7x, Accessed 2019.

[82] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.12.

[83] J. Collins, E. Doherty, O, Traynor, 'Selection into Surgical Education and Training', in D. Nestel, K. Dalrymple, J. Page, R. Aggarwal, eds., *Advancing Surgical Education: Theory, Evidence and Practice*, Springer Nature Singapore Pte Ltd, 2019, pp.157-170.

[84] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.194.

[85] A. Cooper, 'Surgical Lectures', *The Lancet*, 1, 1 (1823), pp.3-10.

[86] W. Lawrence, 'Lectures on Surgery, Medical and Operative. Lecture 1, Introduction' *The Lancet*, 1. (1829-1830), pp.33-42.

anatomy and physiology, and advised students to 'prepare yourselves for operating on the living by cutting the dead', he pointed out that this alone would not make the pupil acquainted with disease. To learn about various diseases, he recommended the pupil must 'frequent the hospital and the sick chamber and observe diseases for yourselves.'[87] These recommendations reflect the expansion of the 'curriculum' for those wishing to practice surgery.

The content of the students' curriculum was defined by what their surgical teachers chose to address in their teaching. An example of this is illustrated in the content of the lectures delivered by Sir Astley Cooper at St. Thomas's Hospital commencing on 1 October 1823 and subsequently published in several volumes of *The Lancet*.[88] Clinical experience was dependant on the case-mix of patients encountered by students on the hospital wards and in the community, and familiarity with operative surgery was learned by observing the procedures which were being performed in the operating theatre.

By the commencement of the nineteenth century, some leading surgeons had noticed the unduly large numbers of students who were beginning to consider surgery as a favoured form of management of certain ailments and were being attracted to this discipline as a potential future career. They were concerned that medical students were becoming overly influenced by the showmanship-like behaviour of some surgeons during operative procedures, and by their overzealous choice of surgery as the preferred form of treatment. In addition, these leading surgeons began to share what they considered were the desirable attributes of those aspiring to train and practice as surgeons. I will discuss this in detail in the more appropriate context of the focus of Chapter 6.

James Parkinson believed that students saw surgery as 'heroic and a pathway to fame and fortune', and accounted for this perception on the basis that a pupil:

> sees a dreadful operation performance, and with the happiest success: the operator obtains the applause which is due, and our student, … [believes it will] secure him the fame for which he pants.[89]

He listed the broader competencies that a surgeon must possess and cautioned students that operative skills were the least of these, and that those wishing to become surgeons would have 'to submit to long and heavy – and even wearisome plodding, through

[87] Lawrence, 'Lectures on Surgery.
[88] Cooper, 'Surgical Lectures'.
[89] Parkinson, *The Hospital Pupil,* pp.82-83.

the paths of science.'[90] James Lucas similarly warned students of the danger 'of being captivated by the specious shew of dexterity in handling an instrument', and that instead of 'operations being deemed a standard of surgical fame', they should be considered the 'least credible methods of cure, in most cases; and with few exceptions, the last resource, after less harsh measures have been fairly tried without prospect of relief.'[91] Likewise, Sir William Lawrence, informed his students in 1830 that 'the performance of operations is often the least important part of the surgeon's duty.'[92] Lawrence included that amongst the responsibilities of a surgeon were judging whether a complaint was curable by other means, perceiving when surgery was advisable and its correct timing, preparing the patient for surgery and being actively involved in their postoperative care.[93] Similarly, the London surgeon James Wardrobe cautioned his pupils not to believe 'that success in the performance of surgical operations can ever prove the legitimate basis of your professional character and reputation.'[94] He added that surgeons' 'desire of performing operations [was] merely for self-gratification and applause.'[95]

Apart from warning students about the limitations of surgery and the dangers of being captivated by the showy performance of certain surgeons, these contemporary leaders alerted them to the fact that some of their surgical colleagues were overzealous in their desire to operate. The London surgeon John Abernethy (1764-1831) who was also President of the Royal College of Surgeons of London, remarked to his students in 1817 that 'operations should never be induced but in cases of absolute necessity. A surgeon should never approach a victim for an operation but with humiliation.'[96]

In 1850, the London surgeon Frederic Skey, wrote that a knowledge of the principles of operative surgery ought to regulate the conduct of the surgeon, including the importance of deciding whether surgery was necessary. This was all the more important as anaesthesia and pain-free surgery had become available in 1846 with perhaps the temptation to operate more frequently.[97] He warned students that to elevate surgery by 'attaching to it a value beyond its absolute worth is to carry ourselves back into the past; to depreciate its values, is to exhibit an ill-judged reliance on remedies notoriously incompetent to cure.'[98]

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[90] Parkinson, *The Hospital Pupil,* pp.82-85.
[91] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.193.
[92] Lawrence, 'Lectures on Surgery'.
[93] Lawrence, 'Lectures on Surgery'.
[94] J. Wardrop, 'Lectures on Surgery'*, The Lancet,* 11, (1832-1833), pp.453-459.
[95] Wardrop, 'Lectures on Surgery', pp.453-459.
[96] J. Abernethy, *The Surgical Works of John Abernethy*, Longman & Hurst, London, 1817, vol 3, p.343.
[97] Skey, *Operative Surgery,* p. v-vi.
[98] Skey, *Operative Surgery,* p. vi.

Each of these well-known surgeons were keen to impress upon their students, the principle of avoiding surgery if a more appropriate and especially pain-free alternative method of treatment could be found. Furthermore, unnecessary surgery brought criticism on the surgeons from other medical practitioners and from the public. By focusing on the wisdom of reserving surgery for those where no other forms of management might succeed, and by highlighting some of the desirable attributes of a surgeon, these leaders established another important milestone in the journey towards the professionalization of surgery.

Expansion and maintenance of knowledge and skills through research

James Lucas noted in 1800 that 'sound learning, close application, and unremitting perseverance' were responsible for the numerous and beneficial improvements which had occurred in surgery.[99] In 1830, Lawrence informed his students that it was the boast of modern surgery to have:

> greatly diminished the number of operations … by one-half or two thirds … [through] improved knowledge of the nature and treatment of disease, acquired by the anatomical, pathological, and practical research of surgeons.[100]

The advances made through study, application, perseverance, and research not only contributed to the non-operative management of disease, but also resulted in the greater use of conservative or preservative surgery. One example lay in the efforts being made to conserve part of a patient's limb as opposed to performing a full amputation.

The increasing involvement of surgeons in scientific research and experimentation led to the expansion and maintenance of surgical knowledge and skills and was an important part of the professionalization of surgery. Surgeons like John Hunter, John Abernethy, Astley Cooper, Charles Bell and others divided their time between consultative and operative practice, and research and experimentation. These men demonstrated that surgery was a profession based on learning and scientific principles discovered through experimental science and natural history. They saw themselves as the first generation of surgeons to practise scientific surgery and by example demonstrated to their colleagues the way forward for future surgeons. Cooper reinforced this ethos by referring to those surgeons who failed to study and learn from their experience as 'the ignorant and unobserving member(s) of the profession.'[101]

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[99] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.75.
[100] Lawrence, 'Lectures on Surgery'.
[101] A. Cooper, *Illustrations of the Diseases of the Breast,* Part 1, Longman, Rees, Orme, Brown, & Green, London, pp. 1-3, https://archive.org/details/b21913249, Accessed during 2018.

Those who aspired to be 'pure' surgeons working predominantly in hospitals unlike apothecary-surgeons whose practice was wholly in the community. They first completed a standard apprenticeship and a period of broad studies including an attachment to a hospital. This was followed by further experience as a surgeon-apothecary and the successful completion of the Membership examination at a college of surgeons. Once they had completed these requirements, they were considered eligible to apply for a hospital post and if appointed, expected to adhere to the hospital's rules and regulations.[102]

Obtaining such a post particularly at the London hospitals was mired in controversy due to the large part played by political and family influences rather than meritocracy. One prominent example was the appointment of Bransby Cooper (1792 -1853) to the staff of Guy's Hospital through the patronage of his uncle Sir Astley Cooper. The extent of nepotism in hospital appointments, and Bransby's subsequent failed attempt to remove a bladder stone from a strong and healthy patient who died shortly after the operation, were reported in full detail in *The Lancet* in 1828*.* This led Bransby Cooper to sue the editor Thomas Wakley and although he was awarded damages of one hundred pounds, the publicity given to the limitations of Cooper's surgical expertise and the fatal consequences for his young patient were acknowledged as a triumph for Wakley and *The Lancet*.[103] The case generated enormous publicity and was recognized nationally as a landmark in surgical care, the details of which were widely published in the media including in *The Times.*[104] The long transcript of this court case which was published in full in *The Lancet*, provides a unique insight into the contemporary thoughts on surgery by the many surgeons, members of the legal profession and others who were called to give evidence during the court hearing. This case established the core surgical and legal principle that it was the responsibility of every surgeon to ensure they had the knowledge, skills, and experience necessary to undertake a specific surgical procedure before embarking on surgery. This event in 1828 was another important milestone in the professionalization of surgery.

In terms of the assessment of surgeons in training, those entering the army or navy were required to pass an examination for Membership of the Company of Surgeons of London and subsequently for Membership of one of the Royal Colleges of Surgeons. As mentioned earlier, those wishing to practise as hospital surgeons were required to pass a similar examination. An increasing number of surgeon-apothecaries likewise obtained the Membership although this was not strictly necessary for those in the smaller towns or rural

[102] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* pp.291-293.
[103] Court of King's Bench, 'Containing a Verbatim Report of the Trial of Cooper v Wakley', *The Lancet,* 1, (1828-1829), pp. 353-373; Cooper v Wakley, *The Lancet*,1, (1828-1829), pp.374-381.
[104] The Times, 'Our Report of the Operation of Lithotomy at Guy's Hospital', Cooper V. Wakley, December 13, 1828, p.1, & December 15, 1828, p.3.

areas. Once the different Royal Colleges of Surgeons in the United Kingdom and Ireland established the Fellowship (FRCS) examination, it became a requirement for all surgeons seeking hospital appointments.

The Apothecaries Act of 1815 required those who wished to practise as apothecaries in England and Wales to undertake an apprenticeship including a period in a hospital and to obtain a qualification through examination. The Society of Apothecaries became responsible for carrying out the provisions of the Act and awarded a Licence of the Society of Apothecaries (LSA) to those who were successful in their examination.[105] Through the Apothecaries' Act of 1815, apothecaries achieved enhanced status.[106] A significant proportion of surgeon-apothecaries were already in possession of the Diploma of the Royal Colleges of Surgeons of London, and many also obtained the Membership. Although the Diploma of the Royal College of Surgeons of Edinburgh entitled the holder to practise as a surgeon-apothecary in Scotland, it was not recognised by the Act.

Changing the public image of surgeons and surgery

In reflecting on the level of status and influence surgeons had reached by the middle of the nineteenth century, the London surgeon Frederick Skey described surgeons as - 'wielding a power grander and more critical, and, at the same time, more terrible to humanity, than the member of any other branch of our profession.'[107] In his comparison of the authority and power of the surgeon with that of the physician, Skey wrote:

> the pursuits of the physician appear both trivial and tedious. The occasional error of the physician is corrigible, that of the operator is fatal. Life and death hang suspended on his effort; healthy recovery, deformity, and death are the issue on his hand.[108]

Ignoring the extravagance of Skey's words, surgeons had done much to transform their image over the previous century from being labelled as the manual workers or tradesmen of medicine, cold and callous, 'aligned with barbers and scathingly compared to butchers', and subservient to the physicians, to their now equal or possibly higher status.[109] Physicians who were already recognized as the learned practitioners had actively cultivated their identity as 'lean, grave, learned gentlemen', and the head of the medical profession.[110]

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[105] Hunting, *A History of the Society of Apothecaries*, Society of Apothecaries, pp.198-199.
[106] H. Perkins, *The Origins of Modern English Society 1780-1880,* 1969, p. 255.
[107] Skey, *Operative Surgery,* pp. viii-ix.
[108] Skey, *Operative Surgery,* pp. viii-ix.
[109] Porter, 'The Eighteenth Century', p. 434.
[110] Lawrence, 'Medical Minds, Surgical Bodies', p. 183.

They relied on their learning and cultivated scholarly role as one means of regulating other practitioners as well as a way to attract an elite clientele. Surgeons escaped from their previous lowly position in the seventeenth and early eighteenth century when physicians regarded them and apothecaries as the instruments of medicine implying a subservient role. The physician Charles Goodall noted in 1676 that the College of Physicians of London was 'fully resolved, … to encourage and protect these two necessary instruments of physic, the surgeons and the apothecaries.'[111]

Surgeons were easy fodder for those producing caricatures and satire, and 'at first sight … they were also lumped with butchers.'[112] Historian Christopher Lawrence observed that one way to denigrate a surgeon was to call him a butcher.[113] He cited the British historian Sir Keith Thomas in demonstrating that the association of surgeons with the term butchers went back at least to the Middle Ages when the French surgeon Henry de Mondeville declared that surgeons, like other specialists in the flesh, must 'boldly cut and destroy.'[114] Christopher Lawrence also cited the London physician George Thomson who in 1665 observed that, 'we know … that Surgeon(s) are too forward to lop off parts and butchery to cut holes in the skin.'[115] Dorothy and Roy Porter cited the English Peer Lord Herbert who in 1787 wrote, 'Never for God's sake see a d----d D-ct-r again as long as you live,' after he had done with the services of 'butcher Pott', the famous English surgeon Sir Percival Pott.[116] Peter Stanley cited the sailor Richard Dunn as saying of surgeons, 'you are a hard set of butchers', following the amputation of his leg aboard ship in 1812.[117]

Peter MacFlogg'em (pseudonym) in his 'play on words' publication of 1813, recommended that a surgeon should possess 'the unfeeling brutality of a butcher.'[118] Furthermore, he wrote that he should 'parade his knives, saws, scissors, lancets, gorgets, and other unsightly instruments, as well as his apron, sleeves etc to resemble as much as possible the appearance of a butcher.'[119] Reflecting on the state of surgery in the early

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[111] H. Cook, *The Decline of the Old Medical Regime in Stuart London,* Cornell University Press, Ithaca, 1986, p. 204.
[112] Lawrence, 'Medical Minds, Surgical Bodies', p.184.
[113] Lawrence, 'Medical Minds, Surgical Bodies', p.194.
[114] K. Thomas, *Man and the Natural World: Changing Attitudes in England, 1500-1800*, Allen Lane, London, 1983, pp.287-300.
[115] Lawrence. 'Medical Minds, Surgical Bodies', p.187; G. Thomson. *Galeno-Pale*, London, 1665, p.32.
[116] D. Porter, R. Porter. *Patient's Progress,* p.53; Herbert (ed.), Pembroke Papers, 11, 318.
[117] Stanley, *For Fear of Pain British Surgery, 1790-1850,* p. 105; Thomas, *Man and the Natural World: Changing Attitudes in England, 1500-1800*, pp.287-300.
[118] P. MacFlogg'em, (pseud), *Aesculapian Secrets Revealed: or Friendly Hints and Admonitions Addressed to Gentlemen of the Medical Profession, and the Public in General*, C. Chapple, London, 1813. p.97. https://archive.org/details/b22019364. Accessed 19 November,2018.
[119]MacFlogg'em, (pseud), *Aesculapian Secrets Revealed,* p.106.

nineteenth century, the Dublin surgeon William Doolin wrote in 1949 that even the most famous surgeon who then stood at the head of his profession in London, Paris, or Dublin:

> was in the popular estimation little better than a butcher, an object of terror to the shrinking wretch doomed to suffer his administration and not infrequently a source of bewilderment and uncertainty to himself.[120]

There were of course other reasons for the unflattering stigma attached to surgeons apart from inflicting pain during surgery. The increasing demand for human cadavers for dissection exceeded the supply and led to agents of the surgeons including grave diggers or 'body snatchers' procuring the bodies of the recently buried. This activity and the close association of surgeons with these grave diggers became well known to the public. Furthermore, an Act of Parliament for 'better Preventing the horrid Crime of Murder' was passed in 1752 and gave judges the discretion when pronouncing death sentences for murder, to substitute dissection for gibbering in chains, thereby adding to the terror of the punishment. As Ruth Richardson pointed out, the Act implied that, 'surgeons were regarded by law as agents of the Crown and protected as such.'[121] The role of the surgeons in the aftermath of the execution was obvious to the public, as the Act required them to immediately transport the body from the gallows to their premises for dissection. In fact, friends and family of the deceased often tried to prevent the agents of the surgeons from taking the body. Events surrounding these public executions and the public riots which took place against surgeons or their agents who were procuring the bodies of the recently executed at Tyburn, was well described by the historian Peter Linebaugh in 1975.[122] The association of surgeons with grave diggers and their immediate procurement of the bodies of executed felons for dissection led the public to view them with grave suspicion and even disdain.

Sir Astley Cooper appeared before a Select Committee appointed by the British House of Commons in 1828, 'to inquire into the manner of obtaining Subjects for Dissection in the Schools of Anatomy, and into the state of the Law affecting the Persons employed in obtaining or dissecting bodies.'[123] In his evidence, Cooper stated that:

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[120] W. Doolin, 'Dublin Surgery 100 Years Ago'*, Irish Journal of Medical Science*, 24, 3 (1949), p.97.
[121] R. Richardson, *Death, Dissection and the Destitute,* Routledge & Kegan, London and New York, 1986, p.37.
[122] Linebaugh. P, 'The Tyburn Riot against the Surgeons', in Hay. D, Linebaugh. P, Rule. J, Thompson. E, Winslow. C, *Albion's Fatal Tree: Crime and Society in Eighteenth-Century England*, Allan Lane, London, 1975, pp.65-117.
[123] Richardson, *Death, Dissection and the Destitute,* p.101.

> the law does not prevent our obtaining the body of an individual if we think proper; for there is no person, let his situation in life be what it may, whom, if I were disposed to dissect, I could not obtain.[124]

Cooper's predilection for dissecting human cadavers was public knowledge and this was reflected in a letter sent to him by one of his patients Mr Williams (MS008.2.2.1.), who offered Cooper his 'mortal remains' for dissection.[125]

To disassociate themselves from the images and descriptions with which they were being often portrayed, surgeons used a variety of approaches to remodel their public persona.[126] They responded to the accusation of their similarities to butchers, by 'the abandonment of the language of the butchery for technical knowledge.'[127] One example was exchanging the word sweetbread for the pancreas. As historian Susan Lawrence has noted, this was part of a new era where 'trained practitioners increasingly used more precise, technical language for describing both clinical and post mortem appearances.'[128] Some of the qualities of a butcher such as their capacity for physical endurance, their courage, solidity and honesty, were highly prized in the Victorian culture of manliness, and surgeons presented themselves as fearless and self-reliant gentlemen and as 'the embodiment of heroism and manliness.'[129]

Surgeons began to value even more than previously, the importance of empirically acquired knowledge of the structure and function of the human body and became experts in as well as teachers of anatomy, physiology, and pathology. They believed the body could best be understood in health and disease in terms of its local physical structure and function, and built their own corpus of knowledge, which provided further evidence that surgery was becoming a profession based on learning and experimental science. As was demonstrated by the physicians, one route to achieving higher status in the community was to be regarded as a gentleman and of good manners. This 'respectability' was the conscious aim of 'gentleman practitioners.'[130] According to the English physician and medical historian Charles Newman and Stephen Jacyna (as quoted previously), surgeons achieved this enhanced status through the establishment of the Royal College of Surgeons of London in 1800.[131] A key characteristic of a gentleman was a person who did not work with their hands,

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[124] Richardson, *Death, Dissection and the Destitute,* p.63.
[125] Royal College of Surgeons of England Library & Archives, Mr Williams (MS008.2.2.1.), viewed 21 May 2018.
[126] Barnett, *Crucial Operations*, p.42.
[127] Lawrence, 'Medical Minds, Surgical Bodies', p.188.
[128] S. Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth-Century London*, Cambridge University Press, Cambridge, 1996, pp.306-307.
[129] Lawrence, 'Medical Minds, Surgical Bodies', p.194.
[130] Perkins, *The Origins of Modern English Society 1780-1880*, p.254.
[131] C. Newman, *The Evolution of Medical Education in the Nineteenth Century*, Oxford University Press, Oxford,

and this created obvious challenges for surgeons. However, surgeons began to present this 'scientifically principled art as something suitably practised by gentlemen.'[132] According to historian and sociologist of science Stephen Shapin, surgery adopted and used scientific culture 'not in opposition to gentility, … but to redefine gentlemanliness in professional terms.'[133]

The newly discovered knowledge was also used as a basis for the expansion of surgery. In 1761 the Italian Giovanni Morgagni (1682 – 1771), anatomist and father of modern anatomical pathology, published his *De Sedibus et Causis Morborum (On the Sites and Causes of Disease*). Based on his personal findings from 700 post-mortems, he demonstrated that some diseases were located in specific organs, and that the pathological changes in these organs were responsible for most disease manifestations and not bodily humors. As previously mentioned in this chapter, the French surgeons who performed post-mortems on the bodies of those who died in their hospital institutions found similar findings Morgagni. This confirmed a physical basis of several diseases, rather than generalised humoral imbalances as was the view since the time of Galen. This has been referred to by historian Owsei Temkin as a 'surgical point of view' or an anatomical and local pathological approach to disease and was later adopted by the physicians. Temkin described this approach as playing an important role in the rise of modern medicine[134]. Armed with this local concept of disease, surgeons concluded that some of these conditions were amenable to surgical treatment.[135] Lawrence questioned whether this knowledge created by surgeons, possibly served their interest, and had within it 'the possibility or even the desirability of surgical intervention.'[136]

By focusing on the correlation between post-mortem findings and the previous symptoms and physical findings in these patients, the interior of the body became redefined as the domain of the surgeon with the possibility of surgeons treating internal diseases by opening the body cavities. Internal medicine was therefore no longer the province of the physicians alone, and like external disease could be managed by surgeons, leading to expansion in surgery and indirectly, a rise in their status. In citing Temkin, Lawrence wrote, 'the conceptual foundation of surgery's massive transformation in the nineteenth century was

1957, p.2 & p.73; Jacyna, 'Medicine in Transformation, p.30.

[132] Lawrence, 'Medical Minds, Surgical Bodies', p.188.

[133] S. Shapin, 'A Scholar and a Gentleman. The Problematic Identity of the Scientific Practitioner in early Modern England', *History of Science*, 29, (1991), pp.191-218.

[134] O. Temkin, 'The Role of Surgery in the Rise of Modern Medical Thought', Bulletin of the History of Medicine, 25, 3, (1951), pp.248-259.

[135] Temkin, 'The Role of Surgery in the Rise of Modern Medical Thought', pp.248-259.

[136] Lawrence, 'Democratic, Divine and Heroic', p.14.

the idea that internal diseases were pathologically the same as external ones and therefore accessible to the knife.'[137]

The development of hospitals in the second half of the eighteenth-century enabled surgeons to get a foothold in the new and expanding medical services and helped to raise their status. Similarly, the new and expanded hospitals enabled those wishing to become surgeons or surgeon-apothecaries to obtain a broader experience and better education. Writing in 1772, the Edinburgh physician and moralist John Gregory observed:

> if a surgeon or apothecary has had the education and acquired the knowledge of a physician, he is a physician to all intents and purposes, whether he has a degree or not, and ought to be respected and treated accordingly.[138]

Furthermore, this new breed of surgeons separated themselves from some of the surgeons and surgical practices of the distant past by redefining their historical roots. They claimed their origin went back but a century or two and was founded by such respected surgeons as Ambroise Paré in France, or Richard Wiseman and William Cheselden in England. Textbooks of surgery were published in the vernacular with a new surgical vocabulary and celebrated those surgeons who focused on reducing unnecessary operations and possessed the attributes of sympathy and humanity.

The status of surgeons was further raised once the importance of their contributions to the health of the armed forces and to colonial expansion was fully recognised.[139] Military historian Catherine Kelly cited various historians who have more recently:

> exploded traditional military medical histories that dismissed these practitioners as ill-educated butchers purveying a medicine based on misguided science, … [and that] crucially, recent scholarship has established a profile of the typical recruit to the medical service and proved that his education was not, as held in popular mythology, woefully inadequate.[140]

Warfare created a greater demand for naval and military surgeons and provided a major opportunity for learning surgery. To begin with, surgeons were of lowly rank and poorly prepared for the social, medical, and surgical challenges they had to face. Some surgeons

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[137] Lawrence, 'Surgery and its Histories', p. 40; Temkin, 'The Role of Surgery in the Rise of Modern Medical Thought', pp.248-259.

[138] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.51.

[139] C. Kelly, *War and the Militarization of British Army Medicine, 1793-1830,* Pickering and Chatto, London, 2011.

[140] Kelly, *War and the Militarization of British Army Medicine*, pp.4-5; M. Ackroyd, L. Brockliss, M. Moss, K. Retford, J. Stevenson, *Advancing with the Army: Medicine, the Professions, and Social Mobility in the British Isles, 1790–1850*, Oxford University Press, Oxford, 2006.

with previous experience in the services sought to better prepare and equip those who had just joined and to help them gain the confidence of the servicemen and their commanders, and 'break the mould of tradesmen, butchers and bloodletting mountebanks.'[141] Whilst the expectations of the surgeons and of the servicemen were initially restricted, the second half of the eighteenth-century and the early part of the nineteenth, 'traversed considerable development in military and marine surgery.'[142]

Surgeons became indispensable to the army and the navy. This was recognised in the creation of academic appointments in Military Surgery, such as the establishment of the Regius Chair in Military Surgery in Edinburgh in 1806.[143] The rise of military surgery was a significant factor in the recognition of surgeons and these men came to be regarded as the aristocracy, although civil surgeons took somewhat longer to gain similar respect. However, the progress of military surgery and medicine was frequently delayed by the 'often vitriolic disputes within the medical service, between medical and civil practitioners, medical practitioners and army officers, and those in which politicians became involved.'[144] Kelly concluded that the majority of these debates were about the type of knowledge which should be considered as affording proof of evidence in medical debates, and how the armed services medical practitioners were striving 'to assert the authority of observationally-based, empirical medicine which shared many of the characteristics of what has been identified by other historians as hospital medicine.'[145]

In her article 'Beyond Words', American historian Leora Auslander pointed out that although 'historians have looked beyond the holdings of archives and libraries, … most historians view words as the most trustworthy as well as the most informative sources.'[146] Auslander proceeded to argue for 'expanding the range of canonical sources that will provide better answers to familiar historical questions.'[147] Visual representation of surgeons in portraits, paintings and lithographs are examples of such sources and continuous iconographic history can provide an insight into how surgeons wished to present their changing public image. Facial expression, body posture, dress and the objects included in the final image, tell us a great deal about what the subject considered important and how

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[141] R. Hamilton, *The Duties of a Regimental Surgeon Considered with Observation on His Qualifications; and Hints Relative to a More Respectable Practice and Better Regulation of that Department,* 2 vols, J. Johnson, London, 1787, https://wellcomelibrary.org/item/b21504349, accessed June 2018; M. Crumplin, *Men of Steel, Surgery in the Napoleonic Wars,* Quiller Press, Shrewsbury, 2007, p.7.
[142] Crumplin, *Men of Steel*, p.8.
[143] Crumplin, *Men of Steel*, p.158.
[144] Kelly, *War and the Militarization of British Army Medicine*, pp.155-156.
[145] Kelly, *War and the Militarization of British Army Medicine*, p.156.
[146] L. Auslander, 'Beyond Words', *The American Historical Review,* 110, 4 (2005), pp.1015-1045.
[147] Auslander, 'Beyond Words', pp.1015-1045.

they wished to be seen by the wider society. As pointed out earlier, satire and images produced by caricaturists can also provide an insight into the public perception of surgeons at any given time in history.

In their mission to raise their status and that of surgery, surgeons ensured their portraits represented them as learned gentleman and scientists, surrounded by scholarly books, anatomy specimens and the fruits of experiments in their museum collections. Examples of the portraits of three famous surgeons which demonstrate the changing styles over the one hundred years of my study, are displayed in the collections of the Royal College of Surgeons of England and shown in Figure 2. The wealthy and well-educated William Cheselden from the beginning of my study period was considered the most dextrous surgeon of his time. The mainly self-taught John Hunter and founder of scientific surgery was from the middle phase, and Sir Astley Cooper - the debonair and confident gentleman surgeon and aristocrat in cosmopolitan attire was from the latter phase. What is striking about these and other portraits of surgeons during this period, is the complete absence of surgical instruments or tools of their trade. The focus was on them as men committed to their calling and devoted to the pursuit of knowledge through science and learning. In so doing, they wished to be recognised as more than mere technicians or manual workers.

Figure 2:

William Cheselden (1688-1752) (By Jonathan Richardson)

John Hunter (1728-1793) (By Sir Joshua Reynolds)

Sir Astley Cooper (1768-1841) (By Sir Thomas Lawrence)

(Permission granted by the Royal College of Surgeons of England)

Collections of portraits of previous surgeons are held and displayed by surgical colleges and similar institutions, leading to questions being asked about the purpose of such exhibitions. The Scottish art historian Duncan Macmillan pointed out that not only are these collections a record of the many surgeons who shaped the history of surgery in the past, they also make 'available to the Colleges' members worldwide a vivid sense of the historic community to which they belong.'[148] Macmillan added that 'it is the gift of portraiture … to allow us to remember all these men … [and] some women too – not just for what they did, but for who they were.'[149]

There may of course be other reasons for displaying portraits and other objects associated with people from the past. In his discussion on 'inventing traditions', historian Eric Hobsbawn, noted that, 'traditions which appear or claim to be old are often quite recent in origin and sometimes invented.'[150] He also noted that this tends to occur 'more frequently when a rapid transformation of society weakens or destroys the social patterns for which the "old" traditions had been designed.'[151] This response can be found in some of the practices of the Royal College of Surgeons of London (and later of England), and the Royal College of Physicians of London due to the upheavals they faced in the early nineteenth century.

According to Stephen Jacyna, College ceremonials were accompanied by the delivery of orations which expounded certain historical claims, and furthermore, their endeavours focused upon trying to find a person from the past who might 'serve some polemic purpose.' Jacyna noted that in their desire to make medical heroes from the past, 'British surgeons after 1800 [sought] to bestow iconic status upon one of their forebears, John Hunter.'[152] Hunter became recognised as the founder of scientific surgery, and a portrait and sculpture of him are prominently displayed in the entrance to the Royal College of Surgeons of England for this very purpose. Similarly, Members and Fellows of the Royal College of Physicians of London celebrate and honour William Harvey (1578-1657), discoverer of the circulation of the blood and the most imposing and exemplary figure in the history of the College. Portraits of Harvey and other informative historical sources associated with him are likewise displayed by the Royal College of Physicians. Colleges tend to be proud of their heritage and use portraits and other memorabilia to justify and portray their history,

[148] D. Macmillan, 'Foreword', *in* A. Masson, ed., *Portraits, Paintings & Busts in the Royal College of Surgeons of Edinburgh,* Royal College of Surgeons of Edinburgh, Edinburgh, 1995, p. xv.
[149] Macmillan, 'Foreword', *Portraits, Paintings & Busts in the Royal College of Surgeons of Edinburgh,* p. xviii.
[150] E. Hobsbawn, T. Ranger, *The Invention of Tradition*, Cambridge University Press, Cambridge, 1983, p.1.
[151] Hobsbawn, Ranger, *The Invention of Tradition*, pp. 4-5.
[152] Jacyna, 'Medicine in Transformation', p.33.

achievements and claims of belonging to a respected professional organisation and perhaps a certain characterisation.

In their article on 'Numinous Objects', Historians Rachel Maines and James Glynn speak of certain objects as if they are 'inhabited by a numen or spirit that calls forth in many of us a reaction of awe and reverence, … [and how objects including works of art], can represent a conscious effort to project philosophical or aesthetic spirit into matter.'[153] These authors also comment how 'the glow of achievement can reside in objects.'[154] One well known example and the subject of a book by William Macmichael (1783 -1839) is the 'Gold-Headed Cane'. This cane is displayed in the library of the Royal College of Physicians of London and was previously owned by several College presidents and other distinguished physicians.[155].

A further example of objects important to surgeons are the tools or instruments used in performing surgery and displayed in medical, science and other museums as part of showcasing the history of medicine. In 1790, the English surgeon Sir Percival Pott considered ancient surgery was 'encumbered with a multitude of awkward and unmanageable instruments.'[156] In 1951 the Swiss medical historian Henry Sigerist, wrote that the history of medicine was 'to a large extent the history of its tools … [and] new and improved tools permitted new and more successful operations, [while] new ideas in surgery called for new instruments.'[157] Sigerist added that the history of surgical instruments 'was closely related to and must be studied in relation to the general history of technology.'[158] However, historian Ghislaine Lawrence wrote in 1992 that this 'was a pronouncement hardly substantiated by work done prior to that date, [and] subsequent authors have not redressed the balance.'[159] Christopher Lawrence noted that British surgeons of the Enlightenment built their claims for recognition on the foundations laid by their predecessors and that their independence depended 'upon empirical knowledge, the study of anatomy, new operative techniques, and innovations in instrument design.'[160] James Kirkup, the English surgeon, medical historian and an acknowledged expert on surgical instruments, noted how surgical instruments 'evolved to facilitate, extend, and refine practices where hands and fingers alone

[153] R. Maines, J. Glynn, "Numinous Objects", *The Public Historian.* 28,1 (1993), pp.8-25, p.9.
[154] Maines, Glynn, "Numinous Objects", p.15.
[155] W. Macmichael, *The Gold-Headed Cane,* Kimpton, London, 1923.
[156] J. Earle, *The Chirurgical Works of Percival Pott,* 3 vols, J. Johnson, London, 1790, Vol, 11, p.109.
[157] H. Sigerist, *A History of Medicine: Primitive and Archaic Medicine,* 2 vols, Oxford University Press, New York, 1951, vol 1, pp.1-19.
[158] Sigerist, *A History of Medicine: Primitive and Archaic Medicine,* pp.1-19.
[159] G. Lawrence, 'The Ambiguous Artefact: Surgical Instruments and the Surgical Past', in C. Lawrence, ed., *Medical Theory, Surgical Practice: Studies in the History of Surgery*, Routledge, London and New York, 1992, p. 295.
[160] Lawrence, 'Surgery and its Histories', p. 37.

prove clumsy and inadequate.'[161] Later he wrote that the design and development of surgical instruments over time portrayed the history of surgery and reflected the developments and refinements which occurred in surgical technique.[162]

However, attempts to investigate the history of the professionalization of surgery through a review of the literature on the history of surgical instruments is beset with difficulties. Lawrence noted in his review of Kirkup's book *The Evolution of Surgical of Instruments* (2006) that, 'there had not been a comprehensive history in English of surgical instruments until now and perhaps there still has not, for this valuable book might be better described as a historical encyclopaedia of surgical instruments.'[163] This probably reflects the challenges in separating the history of surgical instruments from those relating to the developments and refinements in surgical technique, the materials available for instrument manufacture, the technical skills of instrument producers and aspects of the biological sciences.

Conclusion

The aims of this chapter were to investigate how the occupation of surgery was professionalized through organization, education, and research. Commencing with a review of the origins of the three orders of medical practitioners, physicians were found to have originated from the learned clerics and formed themselves into a college, surgeons emanated from the civic world of trades and guilds and formed themselves into a trade guild and livery company with the barbers, and apothecaries began as grocers and became the forerunners of general practitioners. A large percentage of apothecaries practised as surgeon-apothecaries and are therefore an integral part of this study.

Reform-minded surgeons in England, Scotland and Ireland sought to improve the science and art of surgery and separated themselves from the barbers. With the aid of Royal Charters they formed themselves into companies and later colleges. This transformation was delayed particularly in England, by the conflicting private interests and financial considerations of some of the same surgeons who originally sought reform. Surgery was practised by surgeon-apothecaries and by 'pure' surgeons whose daily work was predominantly one of consultations and minor surgery, although 'pure' surgeons occasionally performed more major procedures.

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[161] J. Kirkup, 'The History of the Evolution of Surgical Instruments, 1, Introduction', *Annals of the Royal College of Surgeons of England*, 63, (1981), p.279.
[162] J. Kirkup, *The Evolution of Surgical Instruments: An Illustrated History from Ancient Times to the Twentieth Century,* Norman Surgery Series, no. 13, Novato, California, 2006.
[163] C. Lawrence, Review, 'The Evolution of Surgical Instruments: An Illustrated History from Ancient Times to the Twentieth Century', Novato, California, 2006, *Bulletin of the History of Medicine*, 81, 3 (2007), pp.661-662.

Commencing with apprenticeships in the community, the teaching and learning of those preparing to be surgeons expanded through the opportunities provided in the wards and operating theatres of the new hospitals. Facilities were established adjacent to the hospitals and in separate private amenities for students to undertake cadaver dissection and attend lectures in surgery, medicine, physiology, midwifery and other new and expanding subjects. Mostly taught by surgeons and with a focus on science-based surgery, this expansive approach was not then available in the universities.

The early universities in Britain were indifferent to the needs of higher medical education and Oxford and Cambridge graduated only five medical practitioners in total each year. This changed with the establishment of medical schools in Edinburgh and Glasgow, and later in London and other cities across the Britain, where more accessible and innovative courses and hospital hands-on experience became available. A mixed pattern of medical education emerged across Britain in which students could avail themselves of the different and complementary learning opportunities depending on their financial circumstances and career aspirations.

The involvement of surgeons in scientific research and experimentation led to the expansion and maintenance of surgical knowledge and skills and was an important part of the professionalization of surgery. A new generation of surgeons divided their time between consultative and operative practice, and research, and demonstrated how surgery was becoming a profession based on learning and scientific principles discovered through experimental science and natural history. Concerns that showmanship-like behaviour of some surgeons and an over-zealous tendency to operate provided the wrong example and message to students and led surgical leaders to caution their students on the limitations of surgery and the long and arduous period of training required to become as a surgeon. Surgeons sought to distant themselves from the negative stigma of the past and used several methods to change their public persona and justify their claims of belonging to a profession and presented surgery and surgeons as a scientifically principled art practiced by gentlemen.

The attributes of surgeons which are necessary to demonstrate their professionalism are to be found in the standards of behaviour and ethical codes necessary for satisfactory surgeon-patient encounters and their own self-regulation. The following two chapters will explore the process by which these attributes of professionalism were developed through the formalization of medical morality and the establishment of standards of behaviour and ethical codes of conduct.

Chapter 3

Manners, Morality, and the Surgeon

Introduction

The changes in the economy which accompanied the beginning of the Industrial Revolution in the eighteenth century resulted in increased affluence and a greater demand for medical services. Dorothy Porter and Roy Porter have noted how the newly sustained economy meant that 'from artisans upwards, more people had money in their pockets … [and] demands for services likewise spread.'[1] Many medical practitioners got caught up in the flurry of money-making like everyone else and medical practice became a lucrative "sick trade", little different from the shops or commercial trades and open to their tricks like any other.[2] As a result, medicine became a business as well as a profession.[3] This led to the public being exploited by some regular practitioners as well as by those referred to as irregulars, unorthodox or quacks. In the absence of an official body to provide a form of oversight over the behaviour of medical practitioners, it was left to the marketplace to provide some form of regulation, but this was of minimum benefit given the contemporary focus on financial rewards.[4]

Ethicist Robert Baker, and Dorothy Porter and Roy Porter have shown that medicine was largely deregulated in Georgian England with corporations like the Royal College of Physicians becoming generally inactive. Similarly, the Company of Surgeons and its successor the Royal College of Surgeons of London, played little part in guiding or overseeing the behaviour of their members. Furthermore, the Crown, Parliament, urban corporations, and local magistrates, had only marginal roles in enforcing correct medical practice. The courts rarely became involved in adjudicating affairs of medical malpractice and wrongdoings because the legal system adapted itself to the rules of the marketplace, with its assumption of *caveat emptor,* and a reluctance to interfere with freedom of trade.[5] In addition, the award of patents by the Crown to the sellers of proprietary nostrums and taking

[1] Porter, Porter, *Patient's Progress,* p.9.
[2] T. Beddoes, *A Letter to the Right Honourable Sir Joseph Banks … on the Causes and Removal of the prevailing Discontents, Imperfections, and Abuses, in Medicine*, Richard Phillips, London, 1808, p.100, https://archive.org/stream/b21439047/b21439047_djvu.txt March 2019.
[3] Loudon, *Medical Care and the General Practitioner*, p.28.
[4] Porter, 'The Eighteenth Century', p.450.
[5] R. Baker, D. Porter, R. Porter, 'Introduction', Baker, Porter, Porter, eds., *The Codification of Medical Morality*, p.5.

tax revenues from patent medicines, led to a blurring of the distinction between regular medical practitioners and the irregulars.

In the absence of any official body to monitor, guide and control the behaviour of medical practitioners, one must ask what part was then played by the Hippocratic Oath, so often quoted as the standard of medical behaviour? Sociologist Ivan Waddington pointed out in 1975 that there never was a body which enforced the rules of the Hippocratic Oath. He cited the view of the American pharmacologist, medical historian and ethicist Chauncey Leake, who wrote that prior to the end of the eighteenth century, 'the medical profession tried generally to handle its ethical problems on the basis of the Greek tradition of good taste and personal honour.'[6] In 1977 medical historian Chester Burns published a collection of essays including one in which the Greek scholar and medical historian Ludwig Edelstein observed that although the 'so-called Hippocratic-Oath has always been regarded as a message of timeless validity, … [it is] better understandable [as] a Pythagorean manifesto and not an expression of an absolute standard of medical conduct.'[7]

Others believed the behaviour of medical practitioners was determined by the rules and restrictions of everyday codes of conduct and manners, which were an integral aspect of society at that time. In 1993, Mary Fissell and Robert Baker agreed with the writers just mentioned that there was little evidence that medical practitioners used the Hippocratic Oath to judge or provide governance regarding acceptable or unacceptable behaviour of medical practitioners.[8] Fissell believed the appropriate behaviour and desirable values for a medical practitioner for most of the eighteenth century, were:

> inculcated through the institution of apprenticeship, shaped by general norms of the master/servant and client/patron interactions … [and] governed by general codes of conduct, by the norms and constraints described by 'manners' and 'courtesy'.[9]

However, the use of the norms and constraints defined by manners was limited once their shortcomings as the benchmark of human behaviour became recognized. As a result of the conduct of members of the medical profession in the second half of the eighteenth century, and the absence of an official oversight body and standards of behaviour to provide

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[6] I. Waddington, 'The Development of Medical Ethics – A Sociological Analysis, *Medical History*, 19. 1 (1975), pp. 36-51; C. Leak, *Percival's Medical Ethics*, Williams & Wilkins, Baltimore, 1927, p.36.
[7] L. Edelstein, 'The Hippocratic Oath', in C. Burns, ed., *Legacies in Ethics and Medicine*, Science History Publications, New York, 1977, pp.74-75.
[8] M. Fissell, 'Innocent and Honourable Bribes: Medical Manners in Eighteenth-Century Britain', in Baker, Porter, Porter, eds., *The Codification of Medical Morality*, p.19; R. Baker, 'Medical Propriety and Impropriety in the English-Speaking World Prior to the Formalization of Medical Ethics', in Baker, Porter, Porter, eds., *The Codification of Medical* Morality, p.16.
[9] Fissell, 'Innocent and Honourable Bribes', p.19.

guidance and direction, some medical practitioners became concerned with what they observed and sought reform, during which they used the language of morality to promote their plan of action.

One of the most vociferous was the English physician, scientist, and writer Thomas Beddoes (1760-1808). It was he more than any other who expressed concern about what was happening in medical practice and raised important questions, although he left the finding of a resolution to others. From Beddoes's extensive correspondence, I have chosen his *Letter to the Right Honourable Sir Joseph Banks* as the most relevant to this discussion.[10] In the opening page, Beddoes explained his reason for writing to Banks was because 'you appear to have warmly espoused a scheme for reforming medicine.'[11] Beddoes set himself against quackery and the exploitation of the public through profiteering practitioners, be they regular or irregulars. He considered the public was not capable of judging the ability and character of their practitioners because 'a great part of this public is incapable of distinguishing square from round, black from white, in the forms and colours of medical character.'[12] He believed the medical profession had become corrupt and conversant in the tricks of the marketplace, including advertising and self-publicizing, and were little different from the quacks of the day.

In support of his claim, Beddoes used examples such as the cost of consultations and the treatments then being prescribed. He considered 'physicians are often as needlessly prodigal of their visits … as apothecaries of their portions', both adding to the cost for the patient.[13] He regarded the compliance of the physician towards the apothecary and their interdependence as part of a financially successful medical practice and therefore a further contributor to this problem.

Beddoes's plan for redemption of medicine was for students to commence their studies with a more comprehensive university medical education, and for medicine to become an ethical profession by escaping from the enticements of medicine as a trade. Reflecting on the necessity and the means of acquiring medical facts, Beddoes stated in 1799 that the most important part of human knowledge was that which related to human nature. He regarded the science of human nature as not being capable of division into independent branches such as rules of conduct, of mental faculties and of the human

[10] T. Beddoes, *A Letter to the Right Honourable Sir Joseph Banks … on the Causes and Removal of the prevailing Discontents, Imperfections, and Abuses, in Medicine*, Richard Phillips, London 1808, https://archive.org/stream/b21439047/b21439047_djvu.txt Accessed 11-13. 03. 19.
[11] Beddoes, *A Letter to the Right Honourable Sir Joseph Banks,* p.1.
[12] Beddoes, *A letter to the Right Honourable Sir Joseph Banks,* pp.25-26.
[13] Beddoes, *A Letter to the Right Honourable Sir Joseph Banks,* p.110.

condition, as he claimed some books then professed to do.[14] Beddoes believed that the moralist and the metaphysician would each encroach upon the province of the physiologist. He believed that:

> every code of morals must ground its precepts on a comprehensive view of the laws that regulate feeling and deliver the conditions of an offensive and defensive league, having for its object the well-being of individuals. Without accurate ideas therefore of the causes that affect the personal condition of mankind, how is it possible to conceive any progress in genuine morality?[15]

If therefore every code of morals must ground its precepts on a comprehensive view of the laws that regulate feeling, then escaping from the enticements of medicine as a trade would not of itself be enough for it to become an ethical profession. This new focus on the feelings and well-being of the individual changed the understanding and concepts of morals and behaviour. Until this time manners were regarded as the sole benchmark of personal behaviour and a reflection of the status of the individual. As a result of the decline in manners as such a marker during the second half of the eighteenth century, and the new focus on the feelings and well-being of the individual, a search began for a more sincere way of defining human behaviour in relation to the practice of medicine, and for appropriate standards with which to guide medical practitioners in their relationships with patients. Medical professionalism was at work too.

In Chapter 1, I described that one of the aims of this thesis was to establish how surgeons came to embrace the attributes of professionalism in their encounters with patients. I stated that I would argue an integral part of this process lay in surgeons accepting and implementing new standards of behaviour and ethical codes for their encounters with patients and for their own self-regulation. This chapter will focus on the first part of this process in which the attributes of professionalism were developed and used in describing standards of behaviour, leading to the formalization of medical morality.

To achieve this aim, I will review the rise and fall of manners as the benchmark of personal behaviour and status, and the evolution of the behavioural literature which was part of this change, and the search which followed to find a better understanding of behaviour including that in surgeon-patient encounters. I will then explore how these events prepared the way for the subsequent development of a code of medical ethics. To undertake these

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[14] T. Beddows, *Contributions to Physical and Medical Knowledge, Principally from the West of England*, Collected by Thomas Beddows, T.N. Longman and O. Rees, London, 1799, pp.3-4. https://archive.org.details/b21439114. Accessed 30.04.2019.
[15] Beddows, *Contributions to Physical and Medical Knowledge,* 1799, pp.3-4.

tasks, I will draw upon the letters of Lord Chesterfield who first drew attention to the exploitation of manners. This will be followed by an in-depth analysis of the influential writings of the Scottish physician and moralist John Gregory (1724-1773), with the addition of quotations from the works of the English clergyman and moralist Thomas Gisborne (1758-1846). I will consider their writings in the context by Enlightenment developments relating to the philosophers Bacon and Hume. The contribution by the English physician and ethicist Thomas Percival (1740-1804) to the development of ethical codes will be addressed in Chapter 4.

Rise and fall of manners as the benchmark of status and behaviour

The significance of 'manners' had a long history as reflected in the motto *"Manners makyth man"* given to New College, Oxford, by its founder William of Wykeham in 1379. Historian Michael Curtin has described manners as an essential aspect of the ideal of civilization from the Renaissance to the French Revolution.[16] The literary medium for the discussion of these 'manners' was the courtesy book, and 'the genre concerned itself with the advocacy of ideals of character, accomplishments, habits, manners and morals – in short, the art of living in society.'[17] Commencing with the publication of Sir Thomas Elyot's *The Governour* in 1531, these courtesy books were aimed at the aristocracy, who were set out by birth to play a significant role in the affairs of the state. Their purpose was to provide these individuals with the manners and virtues considered necessary to enable them to better undertake these responsibilities.

The medieval aristocracy was predominantly a military order with many admired virtues, but its violent aggressiveness which previously had made its members so formidable, was increasingly accompanied by a self-conscious vulnerability in civil society.[18] Service to the king and state had become the basis of self-esteem and social status, and the Court was where patronage, power, money, and prestige were predominantly to be found. Moreover, control over outward displays of emotions were regarded as essential to succeed in this environment, as was described by the English writer Fanny Burney based on her experience as Keeper of the Robes for Queen Charlotte in the Court of George III.[19]

The courtesy literature was written by tutors, clergymen, schoolmasters, or gentlemen. It was the mission of these writers to show members of the aristocracy how to use their

[16] Curtin, 'A Question of Manners', p.395.
[17] Curtin, 'A Question of Manners', p.395.
[18] N. Elias, 'The Civilizing Process', vol 1, *The History of Manners*, trans. E. Jephcott, Oxford University Press, Oxford. 1978, 2, pp.232-236.
[19] *The Diary and Letters of Madame d'Arbly*, C. Barrett, ed., 4 vols, Bickers & Son, London, 1891, vol 2, pp.54-55.

energy and behave in civil society, in other words, how to be an aristocratic gentleman. Amongst the many subjects discussed were championing of the 'ideals of character, accomplishments, habits, manners, and morals.'[20] There was an underlying assumption in these courtesy books that 'manners and morals were inseparable and indistinguishable.[21] Manners were therefore discussed in close association with serious moral ideals and depended on this alliance for their status. The cultivation of fine manners and their appreciation was most widespread in the eighteenth century and was helped by the expansion of London and the importance of sociability in that city's society. The courtesy book was also used by aristocratic families living in the country or provincial locations to prepare themselves for a visit to London. Moreover, manners made friends and friends were important in career advancement.

However, criticisms of the moral failings of court life and of the London-based fashionable society which partly succeeded it, led to widespread disparagement of the morality of fine manners as expressed in courtesy books. Simultaneously, 'the vices of flattery, servility, dissimilation, disloyalty, and sexual irregularities which had become problems endemic to society as a whole', further influenced how manners were perceived.[22] Indeed, by the mid-eighteenth-century, manners began to be regarded as hypocritical and a façade under which some of the less favourable realities of society including self-interest could hide.

The increasing criticism of the cultivation and exploitation of fine manners was magnified by Lord Chesterfield's (1694 - 1773) publication of his *Letters to his Son and Grandson*.[23] Written between 1739 and 1766 and first published after his death in 1774, these *Letters* confirmed him as the most notable exponent of the expediency of fine manners. It was, however, the focus in his *Letters* on the use of manners for self-advancement that led to them being increasingly regarded with disfavour. Writing from the perspective of an 'experienced traveller', Chesterfield described their objective was to provide guidance 'to a young man before he starts out for a country full of mazes, windings, and turnings.'[24] Historian Charles Pullen has pointed out that at the time Chesterfield wrote his *Letters*:

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[20] Curtin, 'A Question of Manners', p.395.
[21] M. Morgan, *Manners, Morals and Class in England, 1774-1858*, St. Martin's Press, Inc, New York, 1994, p.11.
[22] Curtin, 'A Question of Manners', p.400.
[23] *Lord Chesterfield's Letters to his Son and Grandson*, *Selected, with Introduction, Biographical Sketch and Notes,* H. Belfield, ed., Maynard, Merrill, & Co, New York, 1897.
http://archive.org>details>lordchesterfield00ches, accessed on repeated occasions during 2018-2020.
[24] *Lord Chesterfield's Letters to his Son and Grandson,* p.5.

> consummate knowledge and the highest moral standards were in themselves only the foundations of worldly success, … a young man must be able in the eighteenth century to ingratiate himself in society by the manifestation of a pleasing (and watchful) public demeanour.[25]

Chesterfield observed that 'there is a certain dignity of manners absolutely necessary to make even the most valuable character either respected or respectable.'[26] Although he regarded learning, honour, and virtue as necessary to gain a person esteem and admiration, Chesterfield considered 'politeness and good breeding' as equally important in making them 'welcome and agreeable in conversation and common life.'[27] This was perhaps why those students wealthy enough to study and graduate from the Universities of Oxford or Cambridge claimed to be gentlemen medical practitioners and were welcomed into the fashionable drawing rooms of the influential social and political groups in late eighteenth-century England. Chesterfield's wishes were for his son to shine and distinguish himself in the learned and the polite world, but he added that few were able to achieve this.[28]

A further theme in Chesterfield's *Letters* was his focus on the critical importance of speech or 'eloquence in speaking.'[29] The most prominent example of this was in London Society where members 'now spoke with a forceful and apparently unanimous voice.'[30] Once this way of speaking became more widespread, it began to be used as another indicator of social status.

Whilst Chesterfield acknowledged and supported the overall importance of manners, it was their use for self-advancement that dominated the discussion in his *Letters*. As he pointed out, 'knowing when and where to make use of these different manners', was important for advancement in society.[31] Although the use of manners in this way was known as part of the Renaissance tradition of self-cultivation, the public admission that it was a common and recommended practice led to manners being seen by the broader community as a commodity which could be purchased and used for self-promotion. A further development highlighted by Curtin was that when manners came to be regarded as trivial

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[25] Pullen, *Lord Chesterfield and English-Century Appearance and Reality, Studies in English Literature,* p.503, https://www.jstor.org/stable/449616. Accessed 26. 09. 2018.
[26] *Lord Chesterfield's Letters to his Son and Grandson, Selected,* p.81.
[27] *Lord Chesterfield's Letters to his Son and Grandson, Selected*, p.17.
[28] *Lord Chesterfield's Letters to his Son and Grandson, Selected,* p.84.
[29] *Lord Chesterfield's Letters to his Son and Grandson, Selected,* p.95.
[30] Curtin, 'A Question of Manners', p.415.
[31] *Lord Chesterfield's Letters to his Son and Grandson, Selected*, p.67.

and unworthy of association with serious moral thought, the courtesy books which described them were doomed.[32]

But this did not mean that manners were no longer considered important in the wider community and in the doctor-patient relationship. Historian Marjorie Morgan has cited statements written by two eminent individuals in Britain about the importance of manners during the eighteenth and nineteenth centuries in her 1994 publication book *Manners, Morals and Class in England,1774-1858*.[33] Politician, writer, and orator Edmund Burke (1729-1797) declared in 1796 that 'manners are of more importance than laws … they aid morals, they supply them, or they totally destroy them.' The author, reformer and surgeon Samuel Smiles (1812-1904) wrote that 'morals, and manners … are of greater importance than laws which are but one of their manifestations. The law touches us here and there, but manners are about us everywhere, pervading society like the air we breathe.' [34] However, as Morgan has shown, a growing distinction and shift in the nature of manners and morals began to characterise society in the late eighteenth century, and she cited as one example the writings on manners by the Reverend John Trusler, where he referred to them as 'not being a moral treatise.'[35]

These developments took place within a rapidly changing contextual environment in Britain and especially in England, during the second half of the eighteenth. The Industrial Revolution resulted in the increasing commercialization and urbanisation of society, and the simmering anti-aristocratic feelings were inflamed by the French Revolution. These factors coupled with the rise of Evangelical religious reformers and the birth of Romanticism brought about great changes. Romanticism with its 'profound and irreversible transformation in artistic styles [and] in cultural attitudes', its search for authentic feeling not inhibited by correctness or social convention, and its focus on the primacy of the individual and the merits of diversity, was incompatible with the previous forms of focus on manners.[36]

Morgan and others have noted the reciprocal influence between socio-economic and cultural forces in history and how socio-economic changes were the main destabilising force in the late eighteenth and early nineteenth centuries. She cited the comment by historian

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[32] Curtin, 'A Question of Manners', p.396.
[33] M. Morgan, *Manners, Morals and Class in England, 1774-1858,* The Macmillan Press LTD, London, 1994.
[34] Morgan, *Manners, Morals and Class in England*, p. 1; E. Burke, 'On the Overtures of Peace', in *Works,* vol. iv, Charles C. Little and James Brown, Boston, 1839, first pub, 1796, p.392; S. Smiles, *Self-Help*, J. Murray, London, 1859, p.323.
[35] Morgan, *Manners, Morals and Class in England*, pp. 11-12; J. Trusler, *Principles of Politeness*, 4th ed, ed., J. Bell, London, 1775; J. Trustler, *A System of Etiquette*, 2nd ed, M. Gye, Bath, 1805, p.23.
[36] Romanticism, *The Oxford Companion to English Literature*, M. Drabble, ed., Oxford University Press, New York, 2000, p.872.

Sheldon Rothblatt in 1976, that 'industrial society was new, it overturned all known values and institutions, it moved at a speed unprecedented in history.'[37] Although some historians regarded the change as less dramatic and emphasised continuity and evolution, the changes were clearly significant.[38] With these changes and the rapid growth of urban populations and public advertising, the public was confronted with increasing numbers of unknown individuals and products making the age-old bases of personal knowledge and character for placing trust no longer viable. This inability to judge moral character and therefore invest trust created a crisis of social confidence.

With the rise of religious fervour in the late eighteenth century, Evangelical reformers set out to reinvigorate the religious life of the nation and provided a stimulus for new genre of behavioural literature or what became known as 'conduct books'.[39] Inspired by religious passion, the Evangelical writers strove to make Christianity the guiding principle of human behaviour and made the combination of manners and morals more forceful than ever before.[40] However, the conception of manners in conduct books differed from that in the courtesy books which they replaced. According to Curtin, the Evangelical writers regarded and valued manners as an outward manifestation of an inner religious nature and moral principles, rather than being valued for their own sake.[41] Although the content of conduct books was comprehensive and included all aspects and stages of life, the emphasis was on religion and morality, with the subordination of manners to morality.

Conduct books tended to be written for the expanding middle-class who considered themselves the custodians of morality and virtue, and achieved their greatest popularity between the 1770s and 1830s. One of the most favoured and of significance to the focus of this thesis was that by the Anglican cleric Thomas Gisborne (1748-1846), in which he included a chapter 'On the Duties of Physicians.'[42] Occasionally, conduct books were written by authors for their children and this was the case with physicians John Gregory and Thomas Percival, two individuals whose other writings are central to this thesis.[43]

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[37] Morgan, *Manners, Morals and Class in England*, p. 2; S. Rothblatt, *Tradition and Change in English Liberal Education, An Essay in History and Culture,* Faber & Faber, London, 1976, p.154.
[38] J. Black, The English Press in the Eighteenth Century, University of Pennsylvania Press, Philadelphia, 1987.
[39] D. Bebbington, *Evangelism in Modern Britain*, Unwin Hyman, London, 1989.
[40] Morgan, *Manners, Morals and Class in England*, pp.12-13.
[41] Curtin, 'A Question of Manners', p.407.
[42] T. Gisborne, *An Enquiry into the Duties of Men in the Higher and Middle Classes of Society in Great* Britain, pp.132-198.
[43] J. Gregory, *A Father's Legacy to His Daughters*, Thomas Ewing and Caleb Jenkins, Dublin, 1774; T. Percival, *A Father's Instructions: Consisting of Moral Tales, Fables, and Reflections, Designed to Promote the Love of Virtue, A Taste of Knowledge, and An Acquaintance with the Works of Nature,* Robert Dodsley, London, 1781.

By the 1830s, a new type of manners literature referred to as etiquette and practised for some years, began to appear in etiquette books and was popularised in England by the publication in 1834 of William Day's *Hints on Etiquette and Usages of Society with a Glance at Bad Habits*.[44] Etiquette is defined as 'the conventional rules of personal behaviour in polite society' and was different from decorum or behaviour in accordance with good taste and propriety.[45] These 'how to' etiquette books codified the rules and customs of fashionable London Society for the large 'numbers of equally inexperienced but newly-enriched, middle class adults seeking the manners, dress and external polish suitable for mixing in fashionable 'Society'.[46] Unlike conduct books, those on etiquette largely ignored the spiritual realm and were therefore primarily secular in nature. According to Curtin, the central moral principle underlying etiquette was 'tact or the capacity for self-sacrifice and a sensitivity as to the feelings of others.'[47] This apparent regard for feeling for others was not necessarily internally felt as the primary focus was on one's reputation in the eyes of others rather than on internal character and moral principles.

Etiquette books were organised around particular social situations such as dinners, balls, receptions, presentation at court or similar and introductions, and became popular in the early nineteenth century. The market for etiquette writings was predominantly amongst the middle class, including merchants, financiers and manufacturers who had become enriched by industrialisation, and some of whom sought to 'convert their economic success into social prestige', and upward mobility.[48] The Reform Act of 1832 provided such 'mobility' by enabling upper-class and middle-class gentlemen to serve in Parliament and to mingle in fashionable drawing-rooms where many political decisions were made and required them to be well versed in the etiquette of mixing in these polite and fashionable circles.

But there was also a separate and increasingly influential middle-class group emerging in early nineteenth-century England for whom etiquette or the conventional rules of personal behaviour and manners were equally important. This group was described by the sociologist Harold Perkins as the 'non-capitalist or professional middle-class', and included 'lawyers, doctors, public officials, journalists, professors and lecturers.'[49] Perkins pointed out how the Industrial Revolution which emancipated the entrepreneur and the wage-earner,

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[44] W. Day, *Hints on Etiquette with a Glance at Bad Habits,* Longman, Rees, Orme, Brown, Green and Longman, London, 1834.
[45] *The New Shorter Oxford English Dictionary*, L. Brown, ed., Clarendon Press, Oxford, 1993, p.858.
[46] Morgan, *Manners, Morals and Class in England*, p.20.
[47] T. Curtin, *Propriety and Position: A Study of Victorian Manners*, Garland Publishing, New York, 1987, pp.72-93.
[48] Curtin, 'A Question of Manners', p.414.
[49] Perkins, *The Origins of Modern English Society*, pp. 252-255.

also liberated the professional man including medical practitioners. By reducing their dependence on patronage, 'this transition enabled them to acquire a greater measure of self-respect, and to demand corresponding respect from society.'[50]

But these middle-class medical practitioners had to make a living in the competitive medical marketplace of the late eighteenth and early nineteenth centuries. Ambitious medical practitioners including surgeons sought to imitate and embrace the social graces and conventional rules of personal behaviour, and to exhibit outward signs of success to help them expand and sustain their medical practices. Fissell noted that the use of wigs functioned as badges of status and cited the contemporary observations made in 1761 by James Collyer, author of *The Parents and Guardians Directory,* about the need for appropriate apparel and deportment if a young doctor and would-be apothecary wished to be successful.[51]

A contrary view on the importance of personal and scientific qualities as opposed to outward signs of success was voiced by the Scottish-born physician and moralist James Makittrick (1728-1802) in his 1772 *Commentaries on the Principles and Practice of Physic.* Having enumerated the chief scientific qualities necessary for a man to successfully practise medicine, he wrote that 'it may be proper to take notice of some others – which are necessary though chiefly moral, … [namely] humanity, prudence, decency of manners, candour and circumspection.'[52] As a consequence Makittrick recommended that a medical practitioner should spend time at his home in study, and in reviewing and contemplating on his cases, unlike those men who have established their reputation, 'by sauntering in coffee-houses, or tippling in clubs; by the size of their wig, jauntiness of air, prettiness of manner, tattling, gossiping, and tale-bearing.'[53]

Manners therefore remained important to the medical practitioner, but it was those of the type referred to as 'decency of manners' and 'polite manners', which were deemed most valuable. According to Lucas it was such manners and affability which 'form a professional man for an easy admittance into the company of his seniors, and afford him frequent opportunities for gaining their esteem.'[54] As was observed by Fissell, this was all part of the

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[50] Perkins, *The Origins of Modern English Society*, pp.254-255

[51] Fissell, 'Innocent and Honourable Bribes', p. 24; J. Collyer, *The Parents and Guardians Directory*, R. Griffiths, London, 1761, p.45.

[52] J. Makittrick, *Commentaries on the Principles and Practice of Physic … To which is Prefixed, An Essay on the Education, and Duties of Medical Men*, T. Becket, London, 1772, pp. xxxiv-xxxviii, http://onlinebooks.library.upenn.edu>book>lookupname, accessed repeatedly 2018-2020.

[53] Makittrick, *Commentaries on the Principles and Practice of Physic,* 1772, pp. xxxiv-xxxviii.

[54] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.80.

process of a young medical practitioner making a career for themselves.[55] Thomas Gisborne advised medical students 'to preserve his manners, dispositions, and morals from being corrupted', and to 'guard against all affections of courteousness, all assumed and delusive softness of manners.'[56]

The social and occupational behavioural ideals described in courtesy, conduct and etiquette books differed in the way that manners and morals were portrayed as either inseparable or divorced from each other. This created a dilemma for the medical profession in the latter half of the eighteenth-century, when British society was experiencing intense moral rehabilitation, and medical practice had become driven by the competition of the marketplace. Moreover, there were no clear identifiable standards of behaviour or an official body to guide and provide some form of oversight over the behaviour of medical practitioners, leaving the public unable to judge whom to trust for their health needs. This led to a search for a different philosophy of medicine and a greater understanding of the morals and behaviour upon which to base the health care of the public and to guide the conduct of its medical practitioners.

Developments in the philosophy of medicine, and the understanding of morals and behaviour

Two particular developments took place in the eighteenth century which influenced the philosophy of medicine and the understanding of morals and behaviour. The first was the renewed interest in the scientific method previously introduced by the English philosopher Francis Bacon (1561-1626). The second was the moral sense theory of David Hume (1711-1776).

The Baconian method has been defined as 'the experimental or inductive system of philosophy propounded by him.'[57] American medical ethicist Laurence McCullough has observed that Bacon based his scientific method on experience, which was currently understood, and not on what had been written previously.[58]

In the mid-to-late-eighteenth century and at a time when manners were beginning to lose their standing as a marker of behaviour, changes had begun to take place in the philosophical understanding of morals and behaviour. This involved the emergence of 'moral sense theory' and its translation into medical precepts and the formalization of medical

[55] Fissell, 'Innocent and Honourable Bribes', p.25.
[56] Gisborne, 'On the Duties of a Physician', pp.145-146.
[57] *The New Shorter Oxford English Dictionary*, 1993.
[58] L. McCullough, *John Gregory and the Invention of Professional Medical Ethics and the Profession of Medicine*, Kluwer Academic Publishers, Dordrecht, 1998, p.35.

morality. Moral sense theory or the theory of moral sentiment - also known as sentimentalism - had a long history but was noticeably elaborated in the Scottish Enlightenment. Different versions were discussed by the Scottish philosophers Francis Hutcheson (1694-1746), David Hume (1711-1776) and Adam Smith (1723-1790), but it was the account provided by David Hume which became the most influential for medical practice.[59] Hume reasoned that moral evaluations arise from our sentiments and that if a person observes a morally admirable or a displeasing action, that action produces in them a corresponding feeling of approval or disapproval, or an emotional response to the experience. Moral sentiments are therefore emotions and Hume maintained that the primary emotion involved and responsible for these feelings was that of sympathy.

Hume believed that sympathy enabled an individual to put themselves in the position of another person when observing them experience suffering or pleasure. According to Hume, when one witnesses human suffering, they are moved by feelings of sympathy to disapprove of the cause of that suffering, because they can imagine themselves being in that position. In other words, one morally disapproves of harm to others because their own feelings of sympathy are roused by instances of violence. Similarly, when one observes a morally laudable act, they approve of it due to sympathy, or when witnessing an act of charity, sympathy moves them to feelings of pleasure or approval. This is somewhat similar to that which is described as empathy or the ability to understand and share the feelings of another. However, the modern interpretation of empathy has become more complex and philosopher Amy Coplan stated in 2011, that 'depending on whom you ask, empathy can be understood as one or more of several loosely related processes or mental states', and she quoted seven different examples.[60] Coplan conceptualized empathy as a 'complex imaginative process in which an observer simulates another person's situated psychological states while maintaining clear self-other differentiation.'[61] This concept was at the heart of what Gregory – as I shall discuss later - referred to as sympathy.

The two most influential figures in the translation of Bacon's scientific method and Hume's moral sense theory into medical precepts and morality, and standards of behaviour and codes of ethics, were John Gregory and Thomas Percival. Thomas Gisborne's contribution was also important but to a much lesser degree. In this chapter, I will focus on the writings of the Scottish physician and moralist John Gregory who in drawing on Bacon's

[59] D. Hume, *An Enquiry Concerning the Principles of Morals*, A. Millar, London, 1751. https://davidhulame.org>texts Accessed 10.10.2019.
[60] A. Coplin,'Understanding Empathy: Its Features and Effects', in A. Coplan, P. Goldie, eds., *Empathy: Philosophical and Psychological Perspectives*, Oxford University Press, Oxford, 2011, p.4.
[61] Coplin,'Understanding Empathy', p.5.

philosophy of medicine and Hume's Enlightenment critique of manners and moral sense theory translated these into medical precepts and laid the foundation for the subsequent development of codes of ethics by Percival. Gregory is a critical source of evidence in support of my argument that the establishment of the key attributes of professionalism enabled the development of standards of behaviour, and therefore I will draw extensively on his writings.

John Gregory (1724- 1773) was born into a distinguished academic family and educated in Edinburgh and later in Leiden where he became familiar with the Baconian method. Following a brief appointment in Aberdeen as Professor of Philosophy, he moved to London to practise medicine and there made the acquaintance of the learned Mrs Elizabeth Montagu (1718-1800) and was greatly influenced by her. Gregory returned to the University of Aberdeen as Professor of Medicine in 1756 and became involved with members of the Scottish Enlightenment. He was appointed as His Majesty's Physician in Scotland and moved to Edinburgh in the mid-1760s where he became Professor of Medicine at the University of Edinburgh.[62] Prior to beginning his regular teaching on the *Practice of Physic*, he gave a series of lectures on medical morality to Edinburgh students and published these in *Lectures on the Duties and Qualifications of a Physician* in 1772.[63]

Historian John Pickstone identified the historical circumstances which 'stimulated and shaped' what Gregory (and Percival) wrote. He considered Gregory wished to defend the 'traditional values of Scottish medicine against the skepticism of the Scottish Enlightenment', as well as those of 'a broad God-fearing culture which clever Edinburgh physicians seemed to him to scorn', and cited that Christopher Lawrence's views were similar to his own.[64] Gregory was clearly motivated by his strong Christian belief and moral principles as can be seen in the content of his lectures and reflected in the 'conduct book' he wrote for his daughters and which I referred to earlier. Gregory's conduct book included material on manners and morals which was similar to that of the evangelistic reformers of the second half of the eighteenth century. McCullough on the other hand interpreted Gregory's motivation to teach and write about medical ethics – not known then by this term – was due to his concerns about the ways in which his colleagues cared for the poor and wealthy sick

[62] McCullough, *John Gregory and the Invention of Professional Medical Ethics and the Profession of Medicine*, pp.15-17.
[63] J. Gregory, *Lectures on the Duties and Qualifications of a Physician*, 1772.
[64] J. Pickstone, 'Thomas Percival and the Production of 'Medical Ethics', pp.162-163; C. Lawrence, Medicine as a Culture: Edinburgh and Scottish Enlightenment, PhD. Dissertation, University of London, 1984, https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos. Accessed June 2018.

patients, based on the power wielded by the faculty and without ethics to guide them in their daily practice.[65]

It was McCullough's view that Gregory's considered 'this lack of ethics as unacceptable … [and] the chief obstacle to medicine becoming a profession in a sense more meaningful than a mere occupation.'[66] Gregory was friendly with Hume and most likely reached this judgement as an Enlightenment Scotsman committed to the Baconian scientific method and through subscribing to Hume's moral sense philosophy. According to McCullough, Gregory regarded the physicians who were 'acting for their own sake and not for the sake of the sick, whether wealthy or worthy poor, violated Baconian method, thus wilfully creating the crisis of moral trust', and it was this which motivated him to address these issues.[67] Gregory's motivation can be gleaned from his analysis of the failures of his contemporary medical colleagues and I will discuss these later in this chapter. I suggest that both points of view are correct and complimentary. It is worthy of note that Gregory published his '*Lectures'* in the same year as his fellow Scotsman and physician James Makittrick published his '*Commentaries'* and the number of similarities between them.

Although Gregory addressed his comments predominantly to 'physicians', I believe that he intended these to apply equally to surgeons and apothecaries. He considered the historical disputes over the boundary between medicine and surgery, and the subordination of surgery to medicine as 'harmful to mankind … often conducted in a manner unworthy of scholars and gentlemen.'[68] He observed that in certain places in the present and in the past, 'surgery has not been reckoned among the liberal professions: but surgeons have ignominiously been classified with the corporation of barbers.'[69] Gregory wrote this in 1772 which was the same year the barber-surgeons of his own city of Edinburgh split into their separate groups and just prior to the Edinburgh surgeons forming their college and obtaining a Royal Charter in 1778. It was highly likely that he was conversant with these discussions in his own city, and that these events as well as working with surgeons in his medical practice would have given him an important insight upon which to base his comments.

Alluding to the fact that diseases of the body are so intimately connected, Gregory considered it was not appropriate to understand some of them perfectly and be entirely

[65] L. McCullough, 'John Gregory's Medical Ethics and the Reform of Medical Practice in Eighteenth-Century Edinburgh', *Journal of The Royal College of Physicians of Edinburgh,* 36, 1 (2006), pp.87-88.
[66] McCullough, 'John Gregory's Medical Ethics and the Reform of Medical Practice in Eighteenth-Century Edinburgh', p.87.
[67] McCullough, 'John Gregory's Medical Ethics and the Reform of Medical Practice in Eighteenth-Century Edinburgh', p.88.
[68] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.45.
[69] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.46.

ignorant of all the rest, implying that all medical practitioners, regardless of their designation, should be knowledgeable in both medicine and surgery. Gregory considered every department of the medical profession as respectable, when exercised with capacity and integrity. Similarly, the cleric Thomas Gisborne recommended in 1797 that those intending to become physicians:

> not to omit to obtain such an acquaintance with the principles of surgery, and with the varied appearances of wounds and surgical cases, as may fully enable him to form a proper judgement.[70]

Whether Gregory regarded physicians and surgeons as equals is somewhat unclear. Gregory's statements were very general, and I believe applied to every medical practitioner. In focusing on the possession of a university degree, Gregory noted that 'as a doctor's degree can never confer sense, the title alone can never command regard: neither should the want of it deprive any man of the esteem and deference due to real merit.'[71] Most importantly, and in the context of the development of surgery at that time and indeed this thesis, Gregory stated that:

> if a surgeon or an apothecary has had the education, and acquired the knowledge of a physician, he is a physician to all intents and purposes, whether he has a degree or not, and ought to be respected accordingly.[72]

Expanding further on this theme, and on the important contributions surgeons and apothecaries were making to the care of the sick and who placed their trust in them, Gregory remarked that:

> in Great Britain surgery is a liberal profession and in many parts of it, surgeons or apothecaries are the physicians in ordinary to most families, for which trust they are often well qualified by their education and knowledge; and a physician is only called where a case is difficult or attended with danger.[73]

Gregory considered that from the patient's perspective it was their medical practitioner's education, knowledge, and experience rather than university degrees that mattered most. It is for these reasons that I believe he was including all medical practitioners in his comments to medical students.

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[70] Gisborne, 'On the Duties of Physicians', p.139.
[71] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.51.
[72] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.51.
[73] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.51-52.

Gregory began his Lectures by describing the practice of medicine as 'the art of preserving health, of prolonging life and of curing diseases.'[74] In his Lecture IV, Gregory added a fourth point of 'making death easy.' McCullough suggested Gregory was here acknowledging his debt to Bacon, and cited Bacon's 'three offices' of medicine as, 'the first where of is the Preservation of Health, the second the Cure of Diseases, and the third the Prolongation of Life.'[75]

Gregory recognized in his lectures that ridicule was being levelled against the medical profession but pointed out that this mockery was against certain physicians, rather than against physic or medicine itself. He first used the term 'profession' to describe the occupation of medicine in his statement that physicians were a body of men who lived by medicine as a profession. In referring to individual physicians he wrote that some 'have acted with candour, with honour, with the ingenious and liberal manners of gentlemen … [and] depend for success on their real merit … but such men are not the most numerous in any profession.'[76] It was his concerns about the ways in which these latter colleagues cared for sick patients which motivated him to teach and write about subsequently became known as medical ethics. Expanding further, he explained that:

> some impelled by necessity, some stimulated by vanity, and others anxious to conceal ignorance, have had recourse to various mean and unworthy acts, to raise their importance among the ignorant, who are always the most numerous of mankind.[77]

He clarified that most of the contemporary satire was being levelled against the notions or manners of these types of individuals, and not against the science itself. In other words, the expanding science of medicine was respected by the community, whereas the behaviour of certain members of the medical profession was the focus of critical satire.

Gregory described to his students how medicine provided an extensive field for the exercise of humanity, through the many opportunities available to physicians to relieve distress, and by 'displaying patience, good nature, generosity, compassion, and all the gentler virtues that do honour to human nature.'[78] He referred to the contemporary allegations of the hardness of heart of medical practitioners, and the belief in the community

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[74] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.6.
[75] McCullough, *John Gregory and the Invention of Professional Medical Ethics and the Profession of Medicine*, p. 46; F. Bacon, 'Of the Dignity and Advancement of Learning', in J. Spalding, R. Ellis, D. Heath, eds., *The Works of Francis Bacon,* Vol. IV, Longman, Cumpers, and Co, London, 1875c, p.383.
[76] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.8.
[77] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.8.
[78] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.12.

that this was due to them being so frequently acquainted with misery. In responding to this accusation, he wrote that he hoped and believed the charge is unjust as 'habit may beget a command of temper, and a seeming composure, which is often mistaken for absolute insensibility.'[79] Twenty years later, Gisborne warned medical students to beware in case their hearts would be rendered hard and their manner unfeeling:

> by attending on dissections of the dead and painful operations on the living; and by being accustomed in his daily visits at the hospital to see and hear multitudinous labouring in every stage and under every variety of disease.[80]

Gregory acknowledged that when this insensibility is real, 'it is a misfortune to a physician, as it deprives him of one of the most natural and powerful incitements to exert himself for the relief of his patient.'[81] He was however also aware that in feeling for the distresses of their patients, medical practitioners were in danger of being overwhelmed by their emotions. He noted that:

> a physician with too much sensibility may be rendered incapable of doing his duty from anxiety, and excess of sympathy, which cloud his understanding, depress his spirit, and prevent him from acting with the steadiness and vigour, upon which perhaps the life of his patient in a great measure depends.[82]

In his opening lecture Gregory reminded his university students of the responsibilities and expectations of a medical practitioner. Obligations to humanity, patience, attention, discretion, secrecy, and honour were each important in dealing with patients, and decorum and attentions were necessary to support the dignity of the profession. In addition, he stressed 'the general propriety of his manners, his behaviour to his patients, to his brethren, to surgeons, and to apothecaries.'[83]

He regarded each of these attributes as important in the doctor-patient relationship as well as that between colleagues. In addressing the moral qualities required in a physician, Gregory wrote that:

> the chief of these is humanity; that sensibility of heart which makes us feel for the distresses of our fellow-creatures, and which of consequence incites in us the most

[79] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.12.
[80] Gisborne, 'On the Duties of Physicians', p.145.
[81] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.12- 13.
[82] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.13.
[83] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.15-16.

> powerful manner to relieve them. Sympathy produces an anxious attention to a thousand little circumstances that may tend to relieve a patient.[84]

Gregory was here interpreting sympathy as it was understood by Hume. He explained its importance in healing as 'sympathy naturally engages the confidence and affection of the patient, which, in many cases, is of the utmost consequence to his recovery.'[85] In addition, he wrote that 'if the physician possesses gentleness of manners, and a compassionate heart, and what Shakespeare so emphatically calls "the milk of human kindness", the patient feels his approach like that of a guardian angel administering to his relief.'[86] Gentleness of manners is here part of a tripartite of attributes, each of which was considered important to the patient's recovery. This was like the comments made by Gisborne who in referring to the general behaviour of a physician towards his patient, noted that:

> those kind and gentle manners which bespeak his sympathy with the sufferer, … [and] unless his manners are characterised by kindness and compassion, the patient will not be able to look upon him as a friend, which is so important to his or her comfort and recovery.[87]

This focus on 'kindness and compassion' was a major change in attitudes to the care of the patient in eighteenth-century medicine and helped to established new standards in medical behaviour and morality. Gregory contrasted these sympathetic attributes with the 'everyday visit of a physician who is unfeeling, and rough in his manners, makes the heart sink within him, as at the presence of one, who comes to pronounce his doom.'[88] He was concerned that 'such physicians as are callous to sentiments of humanity, treat this sympathy with ridicule, and represent it either as hypocrisy, or as the indication of a feeble mind.'[89] He dismissed 'the insinuation that a compassionate and feeling heart is commonly accompanied by a weak understanding and a feeble mind, as malignant and false.'[90] Gregory went on to explain that:

> experience demonstrates that a gentle and human temper, far from being inconsistent with vigour of mind, is its usual attendant; and that rough and blustering manners generally accompany a weak understanding and a mean soul and are

[84] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.22.
[85] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.22.
[86] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.23.
[87] Gisborne, 'On the Duties of Physicians', p.155.
[88] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.23.
[89] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.23.
[90] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.24.

> indeed frequently attended by men void of magnanimity and personal courage, in order to conceal their natural defects.[91]

This profound discourse by Gregory was an important milestone in establishing the importance of humanity and sympathy in the doctor-patient relationship. Furthermore, in doing so, he was making a stand against those whose 'hardness of heart' and 'rough and blustering manners' were bringing the profession into disrepute. It was these types of individuals whom Thomas Rowlandson was perhaps portraying in his cartoon 'The Amputation' and which is described in Chapter 1. In his *Lectures,* Gregory provided a balanced model of medical practice in which the medical practitioner could display humanity, sympathy, and compassion to his patient while at the same time being careful not to allow an excess of sensibility to prevent him from doing what was necessary for the patient's benefit.

Although Gregory's statements on the important attributes of a caring doctor and the expected standards of behaviour were significant milestones in the development of professionalism, they would have meant little, if they were not accepted by at least some of his contemporary colleagues and considered important in the education of apprentices and medical pupils. According to Robert Baker, Gregory's conception of the humane and sympathetic physician was accepted as the norm by the turn of the eighteenth century. For his evidence, he cited 'the improvements which the practice of physic has received from late years, and our progress in feeling and refinement' from the biography on the Lancashire surgeon-apothecary Henry Bracken (1697-1764).[92] Baker regarded 'the standard which measures progress in practitioner-patient relationships in terms of "refine" of "feeling" towards patients, is Gregory's; and the observation that doctors have revised their practices to conform to this standard is thus a testament to his influence.'[93]

Gregory pointed out in his introductory lecture that the practice of medicine was an art which required the moral qualities of humanity, patience, attention, discretion, secrecy, and honour, as well as temperance, sobriety, candour and particularly sympathy. It was these attributes of professionalism that transformed eighteenth-century medicine from a trade into an art. Nonetheless, Gregory acknowledged that most medical practitioners had to make a living from their profession, and hence he noted medical practice had some of the features of a trade as well as an art.[94]

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[91] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.24.
[92] R. Baker, 'The Eighteenth-Century Philosophical Background', in Baker, Porter, Porter, eds., *The Codification of Medical* Morality, p. 95; C[lementson], W, 'Some Account of Henry Bracken, M.D. late of Lancaster', *European Magazine*, *1804,* 45, p.102.
[93] Baker, 'The Eighteenth-Century Philosophical Background', p.95.
[94] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.13.

He was however, concerned that 'the confinement of the study and practice of physic, entirely to a class of men who live by it as a profession, is unfavourable to the progress of the art.'[95] This he said was because the motivation and application for the advancement of medicine, 'is often checked by a necessary attention to private interest, … [and] the same general motives as other men.'[96] As he pointed out, some of them love medicine and would like to devote their time and attention to it, while others practice it merely as a trade.

My own analysis of the Company of Surgeons and the Royal College of Surgeons of London showed that this was indeed the case for some of the London surgeons where their private practice dominated their 'motivation and application'. Clearly, Gregory sought a balance, and for at least some medical practitioners to concentrate more on the advancement of the art of medicine.

The stagnant and unscientific state of much of eighteenth-century medical practice was a concern to Gregory.[97] He attributed this to the lack of an 'established authority to which we can refer in doubtful cases. Every physician must rest on his own judgement which appeals for its rectitude to nature and experience alone.'[98] In other words, each practitioner practised in isolation from his colleagues, and this was neither advantageous to the practitioner, the patient or the 'improvement of the art'. It was the shortcomings of practising in isolation from colleagues and the resulting intra-practitioner disputes which this generated, that concerned Thomas Percival and motivated him to address these issues in his ethical codes, as I will discuss in Chapter 4.

Challenges in judging the merits of medical practitioners

One aspect of Gregory's writings which does not appear to have received much attention was his comments regarding the difficulties faced by the public and by the medical profession in judging the merits or otherwise of medical practitioners. Having provided the arguments for establishing standards of behaviour and described the necessary attributes of professionalism for a satisfactory practitioner-patient relationship, Gregory turned his attention to the application of these standards in everyday practice. He recognized the complexities and difficulties of this task due to the private or concealed nature of medical practice and the dangers of bias entering contemporary peer review.

[95] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.209.
[96] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.209.
[97] K. Boyd. 'Medical Ethics: Principles, Persons, and Perspectives: from Controversy to Conversation', *Journal of Medical Ethics*, 31 (2005), pp.481-486.
[98] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.17.

Gregory contrasted the ability of the public to judge lawyers with that of medical practitioners. For the lawyer, he noted that 'proofs of his knowledge, ingenuity and eloquence are exhibited daily to the world, their value duly ascertained, …. [and] every man's merit, in his profession, may be well known to the public; and in general, suitably rewarded.'[99] He contrasted this to the doctor where from the public's perspective:

> science of medicine alone is kept so carefully concealed from the world, and the art must necessarily be practised in so private a manner as renders it difficult for the public to form a just estimate of a physician's knowledge from the success of his practice. Accordingly, in no other profession is the reward of merit so uncertain.[100]

Although Gregory acknowledged that some practitioners clearly deserved to be awarded merit, he noted that 'the case frequently occurs, to see physicians rising to great eminence, who far from possessing learning or abilities of any kind, are known to be men of weak understandings.'[101] Referring to the failure of the public to identify these 'men of weak understanding', Gregory observed that 'those people seem to have a strange idea of physic who trust their lives in the hands of a man, whose discernment and common sense they would despise on any other occasion.'[102] In 1989 Dorothy and Roy Porter considered this inability of the public to discern the competence or otherwise of medical practitioners was what led to 'doctors of all stripes … [being] often treated with deep distrust.'[103]

Gregory recognized the disadvantages of leaving to medical practitioners who were busy in their medical practices, the responsibilities of judging the merits of their colleagues. This he considered was:

> putting human virtue to too severe a trial: and indeed it is a trespass against the most obvious maxims of prudence and humanity, to suffer people to be tried by judges whose intent it is to condemn them, … [and] whose interest it often is to have [the merits of those who excel] concealed.[104]

Although he acknowledged there was virtue among many of them, he considered the competition and jealousies that existed between those in medical practice was prejudicial to ensuring acclaim. He believed that advances would be achieved by laying medicine more open and by encouraging men of science to study it. He also considered that rapid progress would be made in medicine if physicians were at equal liberty to improve it 'under the

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[99] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.210.
[100] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.210.
[101] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.210.
[102] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.211.
[103] Porter, Porter, *Patient's Progress,* p.12.
[104] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.211-212.

inspection and patronage of men qualified to judge their merit, and who were under no temptation, from sinister motives, to depreciate it.'[105] Gregory wished that 'ingenious men would devote half their time to the study of nature, … the good effects in regard to medicine would soon appear. They would have no interest separate from that of the art. They would detect and expose assuming ignorance and would be judges and patrons of modest merit.'[106] Gregory added that:

> these gentlemen of fortune, … not fettered by early prejudices, unawed by authority, and unbiased by interest, would canvass with freedom all the community received principles of medicine, and expose the uncertainty of many of those maxims of which a physician dares not seem to doubt.[107]

Gregory therefore established the concept of the practice of medicine in which medical practitioners could be trusted to have the knowledge and the professional attributes required, and where oversight would be provided by independent medical colleagues who would reward merit and detect and expose ignorance. Based on this analysis, I agree with McCullough, that Gregory invented the concept of medicine as a fiduciary profession in which the doctor places the interests of the patient above his own.[108]

My own research findings agree with the conclusions made by Robert Baker that, by applying moral sense theory to medical ethics, Gregory not only 'formulated the first modern theory of medical ethics, he also created the ideal of the humanistic physician whose effectiveness derives as much from an empathetic understanding of illness as from medical science.'[109]

By the end of the eighteenth century, Gregory's fundamental reconceptualization of medical morality had provided the moral basis, behavioural rules, and the principles and attributes upon which standards of conduct could be developed and used for self-regulation. It was through the influence of Gregory in particular, and to a lesser extent Thomas Gisborne, that the physician and ethicist Thomas Percival was enabled to codify their behavioural rules in the development of his *Medical Ethics*.[110]

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[105] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.213.
[106] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.213-214.
[107] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.214-215.
[108] McCullough, *John Gregory and the Invention of Professional Medical Ethics and the Profession of Medicine,* p.4.
[109] R. Baker, 'The History of Medical Ethics', in W. Bynum, R. Porter, eds., *Companion Encyclopedia of the History of Medicine*, Routledge, London & New York, 1993, vol. 2, pp. 852-888.
[110]Gregory, *Lectures on the Duties and Qualifications of a Physician;* Gisborne, 'On the Duties of Physicians', Percival, *Medical Ethics*.

Conclusion

The aims of this chapter were to investigate how the attributes of medical professionalism used in the description of standards of behaviour came to be established for medical practitioners in Great Britain. The chapter commenced with an analysis of the changes which occurred in eighteenth-century Great Britain and which led to the commercialization of medical practice and the deterioration of the behaviour of some medical practitioners. The reasons why the existing benchmarks of such behaviour failed to provide the necessary guidance and governance was then explored. An investigation was also undertaken on the search which took place to identify a better and more sincere way of defining human behaviour as it related to the practice of medicine. This was followed by a discussion on the desirable attributes of medical professionalism then being proposed, and their incorporation into new standards of behaviour to guide medical practitioners in their relationships with patients.

The beginning of the Industrial Revolution led to affluence and a greater demand for medical care. The simultaneous expansion in the number of medical practitioners resulted in greater competition for patients and the emergence of profiteering individuals and inappropriate behaviour amongst them. The appropriate behaviour and desirable values for a medical practitioner during most of the eighteenth-century were governed by general codes of conduct and by the norms and constraints described by manners. However, the status of manners fell into decline once they became recognised as a commodity which could be bought and used for self-interest, leaving a void in methods to guide the conduct of practitioners.

Using the ‘Baconian method’ and the moral sense theory of David Hume, John Gregory reconceptualized medical morality. He drew attention to the importance of sympathy, humanity, gentleness of manners and a compassionate heart in administering to a patient’s needs and contrasted these professional attributes with those of the clinician who lacked sympathy, was rough in manners, and whose visits to the patient’s bedside made their heart sink. He advocated against those who were callous and unfeeling through his model of care in which humanity and compassion were balanced with the avoidance of an excess of sensibility which might prevent them from undertaking what was necessary for the patient’s benefit.

Gregory provided the arguments for establishing new standards of behaviour and described the necessary attributes of professionalism for these standards. He recognized the inherent difficulties for the public in judging the merits or otherwise of their doctor due to the private or concealed nature of medical practice. Furthermore, he acknowledged the

weakness of the contemporary system in which medical practitioners judged their medical colleagues because of the likelihood of bias entering peer review due to jealousies and the impact of competition in the marketplace. To resolve these difficulties, he suggested that those who judge others should be drawn from practitioners who did not depend upon medicine for their livelihood. However, it was his recognition and description of the desirable attributes which form standards of behaviour that was his greatest legacy. Examples of how these attributes were assimilated into the writings of contemporary surgeons are provided in this thesis.

These developments were an important milestone in the professionalization of surgeons. They established their fiduciary responsibilities and the importance of having standards of behaviour by which to guide their encounters with patients. Gregory reconceptualized medical morality and described the concepts, principles, and attributes upon which standards of behaviour could be based. What remained to be achieved was the transformation of these principles and standards into a series of codes which could be used to guide and monitor the behaviour of medical practitioners including surgeons. The development of such codes and their publication in *Medical Ethics* by Thomas Percival will be addressed in the next chapter.

Chapter 4

The Formalization of a Code of Medical Ethics

Introduction

One of the aims of this thesis as outlined in Chapter 1, is to establish how surgeons came to embrace the attributes of professionalism. I indicated in the introduction that I would argue an integral part of this process lay in the surgeons accepting new standards of behaviour and ethical codes to guide their conduct and provide a reference point for their self-regulation, and that this was achieved in two stages. The first stage, which was the focus of Chapter 3, examined the development of the principles and attributes of professionalism and their importance in the creation of standards of behaviour. The aims of this chapter are to address the second stage of this process which was the transformation of these principles and attributes into a series of standards or ethical codes. To undertake this task, I will explore the development and publication of *Medical Ethics* by Thomas Percival and will analyse each of its codes in search of messages Percival directed specifically at surgeons and surgery.[1] As part of this analysis, I will also examine whether Percival's codes were about ethics or etiquette and review the statement made by the surgeon Jukes Namm and his colleagues, that 'Percival did not formulate an ethic specific to surgery.'[2]

There is an added reason for concentrating on the development of medical ethics in this thesis which has as its focus the professionalization of surgery and the relationship between surgeons and their patients. English sociologist Ivan Waddington observed in 1975 that because of the central importance attributed to professional ethics in much of the literature on the professions, 'one can hardly aspire to an adequate sociological analysis of the development of professional occupations which does not include an analysis of the development of professional ethics.'[3]

The focus and content of Percival's professional *Medical Ethics* has been interpreted differently by various authors. In 1927, the pharmacologist, medical historian and ethicist Chauncey Leake described Percival's term 'medical ethics' as a misnomer, because it 'refers chiefly to the rules of etiquette developed in the profession to regulate the professional contacts of its members with each other.'[4] Historian, writer and pathologist Lester King

[1] T. Percival, *Medical Ethics*.
[2] J. Namm, M. Siegler, C. Brander, et al, 'History and Evolution of Surgical Ethics: John Gregory to the Twenty-first Century', *World Journal of Surgery,* 38, (2014), p.1569.
[3] Waddington, 'The Development of Medical Ethics, *Medical History*, pp. 36-51.
[4] Leake, *Percival's Medical Ethics*, p.1.

supported Leake's view in 1958, on the basis that Percival designed *Medical Ethics,* 'specifically to establish greater harmony among physicians who had the care of the indigent sick, and was in no way an attempt to explore any vague ethical generalities.'[5] Waddington repeated the view that *Medical Ethics* was more about etiquette than about ethics, and cited and endorsed the opinions of Leake and King as being in keeping with the findings from his own analysis of the document.[6]

Psychiatrist and sociologist Jeffrey Berlant referred to Percival in 1975, as an 'apologist for the corporations … [who] wrote his ethics at a time when the elitist medical corporations had come under democratic attack.'[7] He considered Percival's work was excellent 'as an apology for the corporations', and unsurpassed 'as a means of integrating the professions.'[8] Furthermore, he regarded it as an instrument for solidarity, 'particularly suitable for extending the monopolistic controls of the RCP [Royal College of Physicians of London] to the newly professionalised surgeons and apothecaries.'[9] However, as ethicist Robert Baker pointed out in 1993, Percival was never a member of that College, nor was he a partisan of this or indeed any particular "medical establishment".[10] Baker described Waddington's and Berlant's views as 'revisionist' interpretations of Percival's *Medical Ethics*, based on 'presentism' or the fallacy of reading the past as if it were the present. He considered these writers were motivated by the controversies of their own century and of reading Percival in terms of these contentions.[11]

Regarding the allegations that *Medical Ethics* was primarily about the regulation of intra-practitioner relationships (etiquette) and not the practitioner-patient relationships (ethics), Baker cited the writings of Chester Burns and Edmund Pellegrino as having 'definitively rebutted' this assertion.[12] In 1977 Burns wrote that while:

> Percival offered many precepts about transactions between physicians, surgeons and apothecaries, … [and] emphasized that all matters of consultative decorum

[5] L. King, 'Development of Medical Ethics'*, New England Journal of Medicine*, 258, (1958), pp.480-486.
[6] Waddington, 'The Development of Medical Ethics', pp.36-51.
[7] J. Berlant, *Profession and Monopoly: A Study of Medicine in the United States and Great Britain,* University of California Press, Berkeley, 1975, p.59.
[8] Berlant, *Profession and Monopoly,* p.59.
[9] Berlant, *Profession and Monopoly,* p.59.
[10] Baker, 'Deciphering Percival's Code', *in,* Baker, Porter, Porter, eds., *The Codification of Medical* Morality, p.186.
[11] Baker, 'Deciphering Percival's Code'*,* p.186*.*
[12] Baker, 'Deciphering Percival's Code', p.184; C. Burns, 'Reciprocity in the Development of Anglo-American Medical Ethics, 1765-1865', in C. Burns, ed., *Legacies in Ethics and Medicine,* Science History Publications, New York, 1977, pp.300-307; E. Pellegrino, 'The Virtuous Physician and Ethics of Medicine', in E. Shelp, ed., *Virtue and Medicine*, *Explorations in the Character of Medicine*, D. Reidel, Dordrecht, 1985, pp.237-255.

should be judged in terms of better patient care, … in fact, ideals about the conduct of practitioners towards patients were pre-eminent in Percival's code.[13]

Similarly, in 1986 Pellegrino rejected the claim that *Medical Ethics* was more about etiquette than ethics. He highlighted the core of Percival's virtue-based ethics was on the 'good of the patient', and that 'the good of the patient … is the end the patient and the physician ostensibly seek.'[14] Although Percival's *Medical Ethics* was about more than conflicts between medical practitioners, it was in fact such conflicts which motivated him to develop his codes.

As the eighteenth century drew to a close, the disruptions resulting from conflicts between individual medical practitioners and those between medical practitioners and hospital management became an increasing problem. The competition for patients and the practice of offering consultations and advice to those who were already under the care of another doctor led to jealousies, intra-professional rivalry, and disputes. Furthermore, medical practitioners who had previously practised independently and mainly in the community, were now faced with a new challenge of practising alongside each other in the hospital setting and having to participate in the shared care of patients. At the same time, the growth in hospitals to accommodate the expansion occurring in medical services brought with it the increasing involvement of managers in the administration of these institutions. This eventually led to increasing conflicts between particularly the surgeons and the governors over the administration of the hospitals. It was because of these different conflicts at Manchester Infirmary that Thomas Percival was invited to develop appropriate codes of behaviour to help avoid such disagreements and manage those which might still arise in the future.

Thomas Percival, Manchester Infirmary and the Development of *'Medical Ethics*'

Details of the life and accomplishments of Thomas Percival have been provided by his son Edward.[15] He was born in Warrington in 1740 and after completing elementary school in the local neighbourhood, he entered Warrington Grammar School and later transferred to

[13] Burns, 'Reciprocity in the Development of Anglo-American Medical Ethics, p.301.
[14] E. Pellegrino, 'Percival's Medical Ethics: The Moral Philosophy of an 18th-Century English Gentleman', *Archives of Medicine,* 146, 11 (1986), pp.2265-2269; Pellegrino, *The Virtuous Physician, and The Ethics of Medicine*, pp.237-255.
[15] E. Percival, *The Works, Literary, Moral and Medical of Thomas Percival M.D: To which are Prefixed Memoirs of his Life and Writings and a Selection from his Literary Correspondence,* J. Johnson, London, 1807, http://archive.org>details. Accessed between 2017 and 2020.

Warrington Academy, where he was recognised for his 'diligence in classical studies and his interest in the study of ethics.'[16]

Percival wished to study medicine at the University of Oxford, but this was not open to him because he was a Dissenter and unwilling to sign the Thirty-Nine Articles of Faith, then required by statute on matriculation for both Oxford and Cambridge.[17] Instead, he commenced his studies in Medical Science at the University of Edinburgh and where he attended three sessions. He spent an intervening year in London where he 'diligently availed himself of the advantages which that metropolis affords the student of physic.'[18] While in London, he befriended the prestigious Lord Willoughby de Parham, then Vice-President of the Royal Society of London and the owner of a country residence near Percival's family home in Warrington. In 1765 Percival was unanimously elected a Fellow of the Royal Society of London on the recommendation of Lord Willoughby de Parham and based on the research he had carried out while in London.[19] That same year he moved to the University of Leiden where he completed his medical studies and obtained his M.D. in July 1765.[20]

Percival returned to Warrington later that year where he started in practice as a physician and married the Londoner Elizabeth Bassnett. He moved to Manchester in 1767 where he was appointed as a physician at Manchester Infirmary. He became highly respected in this role as well as that of a medical politician and philosopher. He had a reputation for public service and as one who studied and wrote widely on moral and ethical issues, public health, and on hospital and factory regulations. His intimate knowledge of the medical conflicts which arose at Manchester Infirmary helped him to express his views in the 'Internal Regulations of Hospitals', and which - according to his son Edward - were 'carried into great effect' at Manchester Infirmary.[21] Percival eventually left his formal position at Manchester Infirmary although he remained as an Honorary Physician. He continued to offer consultations and advice to private medical patients at his residence. He corresponded widely and was awarded many national and international honours before his death in Manchester in 1804.

Details of the foundation and subsequent development of Manchester Infirmary are of relevance to this thesis because they provide an insight into the contextual hospital environment in which surgeons and other medical practitioners then practised in Britain. In

[16] Percival, *The Works, Literary, Moral and Medical of Thomas Percival,* pp. v-viii.
[17] Percival, *The Works, Literary, Moral and Medical of Thomas Percival,* p. x.
[18] Percival, *The Works, Literary, Moral and Medical of Thomas Percival,* p. xv.
[19] Percival, *The Works, Literary, Moral and Medical of Thomas Percival,* p. xv.
[20] Percival, *The Works, Literary, Moral and Medical of Thomas Percival,* p. xvii.
[21] Percival, *The Works, Literary, Moral and Medical of Thomas Percival*, p. xxxvii.

addition, it was the events that took place at Manchester Infirmary which became the tipping point for Percival to receive an invitation to develop standard codes of behaviour to be used at that institution, and their subsequent expansion into *Medical Ethics*.

Manchester Infirmary was founded in 1752 by the surgeon Charles White (1728-1813) and a local businessman Joseph Bancroft. A Code of Rules and Regulations was developed for the governance of the institution.[22] Honorary professional staff were chosen, consisting of three surgeons and three physicians, together with two Surgeons Extraordinary. The five surgeons chosen included Charles White and his father Thomas, Edward Hall and his father Richard, and James Burchall. In 1779, Burchall was replaced by Richard Hall, the 24 years old son of Richard Hall senior, in what was then described as a 'kind of nepotism.'[23] Furthermore, it reflected the influence of these two surgical families in the management affairs of Manchester Infirmary. In addition to these appointments, a house apothecary, apprentices, and later medical assistants were added.

Governance of Manchester Infirmary was by wealthy trustees, each of whom was elected on the payment of an annual sum of two guineas. According to the ethicist Laurence McCullough, the motivation of at least some trustees to become governors was 'to provide free medical care to selected populations, mainly the trustees' employees … [or] 'the worthy sick poor.'[24]

By the late eighteenth century, Manchester had grown into a major city where some sections of the community had accumulated great wealth, although many others were poor and even destitute. Amongst the many migrants were those who had become prosperous and who had developed a social conscience regarding the inequalities in this city and surrounding areas. This placed these more liberal minded persons in conflict with those who were more conservative and less inclined to reform.[25]

By 1780, differences began to arise between the trustees of Manchester Infirmary who were interested in reform and those – mainly the surgeons – who were against change. At this time, the surgical families of the Whites and Halls and their supporters had become the dominant influence on the day-to-day management of the Infirmary. As Anglican Tories, they

[22] F. Renaud, *A Short History of the Rise and Progress of the Manchester Infirmary*, 1752-1877, J. E. Cornish, Manchester, 1898, p.13, http://archive.org>details, accessed between 2017 and 2020.
[23] Renaud, *A Short History of the Rise and Progress of the Manchester Infirmary*, p.18.
[24] L. McCullough, 'John Gregory's Medical Ethics and the Reform of Medical Practice in Eighteenth-Century Edinburgh'*, Journal of The Royal College of Physicians of Edinburgh,* 36, 1 (2006), pp.86-92.
[25] J. Pickstone, S. Butler, 'The Politics of Medicine in Manchester, 1788-1792: Hospital Reform and Public Health Services in the Early Industrial City', *Medical History,* 28, (1984), pp.227-249.

were well connected, influential and opposed to reform and expansion. Amongst the reformists on the other hand, were many liberals or Whigs, evangelicals, and dissenters.[26]

A desire by the trustees of the Infirmary to expand services and increase the number of medical and other personnel to cope with the rising population and an outbreak of typhus fever, led to a major confrontation between those interested in reform and expansion, and those – chiefly the surgeons – interested in maintaining the status quo. At a crisis meeting of the Quarterly Board held in September 1790, the trustees voted overwhelmingly to expand the hospital and increase the numbers of staff. In response to their defeat in this ballot, the Honorary Surgeons resigned to force an impasse and the Honorary Physicians followed suit. The trustees responded by appointing six new surgeons and seven new physicians, and a revision was carried out of the rules and regulations used to govern the Infirmary.[27] This revision was undertaken by a committee which had been appointed by the trustees in June 1790 to report on reform of the Infirmary and was composed of all honorary staff including Thomas Percival.[28]

In December 1790, the President of the Board of Trustees of Manchester Infirmary sent a letter to members of the Board to explain how the new rules for governance were widely admired. He added that most of the hospitals in London and across the country had desired that a book of these rules be sent to them, and that these 'will be of universal benefit to our fellow-creatures.'[29] This letter suggests the problems which had occurred at Manchester Infirmary were more widespread. The events at Manchester Infirmary in 1790 which have been referred to by the historian John Pickstone and others as the hospital *revolution,* were a turning point in hospital administration at least in England, whereby the management trustees established their authority over the medical practitioners including the surgeons, in terms of the day-to-day management of the hospital, staff appointments, hospital developments and expansion.[30]

It was following this tumultuous and far-reaching meeting, that Thomas Percival was invited by his surgical and medical colleagues in Manchester to develop a further set of guidelines regarding acceptable professional behaviour for medical practitioners at this institution. On completion, these were adopted at Manchester Infirmary and its related charities.[31] In the preface of Percival's subsequent *Medical Ethics,* he described how the first

[26] Pickstone, *Medicine and Industrial Society,* p.18.
[27] Pickstone, *Medicine and Industrial Society*, p.19.
[28] Pickstone and S. Butler, 'The Politics of Medicine in Manchester', 1788-1792, p.239.
[29] Renaud, *A Short History of the Rise and Progress of the Manchester Infirmary*, pp.38-39.
[30] J. Pickstone, 'Thomas Percival and the Production of Medical Ethics', in Baker, Porter, Porter, eds., *The Codification of Medical Morality*, p.168.
[31] Percival, *Medical Ethics,* p.1.

chapter of that document was composed in the spring of 1792 'at the request from the physicians and surgeons of Manchester Infirmary', and that this chapter 'constitutes the code of laws, by which the practice of that comprehensive institution is now governed.'[32] Percival's initial experience with the implementation of the document at Manchester Infirmary would have provided him with helpful feedback and likely suggestions for its improvement.

In describing his motivation to develop *Medical Ethics,* Percival wrote that he was induced:

> by an earnest desire to promote the honour and advancement of his profession, to enlarge the plan of his undertaking, and to frame a general system of Medical Ethics; that the official conduct, and mutual intercourse of the faculty, might be regulated by precise and acknowledged principles of urbanity and rectitude.[33]

Further examination of Percival's motivation clarifies what he hoped to achieve by developing his *Medical Ethics*. His stated desire was to develop a system of medical ethics which would promote and advance the different orders of the medical profession. He aspired to accomplish this by producing codes which would help to regulate their conduct and communication through the principles of 'urbanity' or courteousness and refinement of manners, and 'rectitude' or morally correct behaviour, each of which were attributes of professionalism. Moreover, in dedicating his manual of *Medical Ethics* to his son Edward, he stated that the study of professional ethics would invigorate and enlarge his understanding, and their observation would soften his manners, expand his affections, and form him 'to that propriety and dignity of conduct, which are essential to the character of a gentleman.'[34]

He circulated printed copies of his expanded draft document amongst a number of people in different stations of life and received encouraging and helpful suggestions in return.[35] The original title was '*Medical Jurisprudence'*, but 'some friends having objected to the term Jurisprudence, it has been changed to Ethics.'[36] This may have been because the term was considered too limited as it was normally applied to the study and theory of law. He recorded 'not only with gratitude, but as the necessary sanction of my work, the names of those who have honoured it with their approbation or assistance.'[37] These numbered twenty-five in total and included thirteen physicians, three barristers or lawyers, three clergymen or theologians, two literary friends and one surgeon, and three other 'eminent persons'.

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[32] Percival, *Medical Ethics,* p.1.
[33] Percival, *Medical Ethics,* p.1.
[34] Percival, *Medical Ethics,* pp. viii-ix.
[35] Percival, *Medical Ethics,* p.2.
[36] Percival, *Medical Ethics,* p.7.
[37] Percival, *Medical Ethics,* pp.139-140.

Percival's initial work on the document was delayed by the premature deaths of two of his sons, and finally completed in 1803 or eleven years after its commencement. It was his intention to expand the work to consider the 'powers, privileges, honours, and emoluments of the Faculty', but he abandoned this plan as it was 'too wide and digressive.'[38]

Percival added an appendix containing *A Discourse on Hospital Duties*, which was a copy of an address given by his son, the Reverend Thomas Bassnett Percival, at Liverpool Infirmary.[39] As this address was delivered to the faculty, officers, clergy, and the trustees of that charity on their respective hospital duties, Percival considered it 'sufficiently appropriate to this present work.'[40] He also defended the 'aphoristic form' of his *Medical Ethics* as it 'forbids … all digression and even precludes the discussion of many interesting points connected with the subject.'[41] For this reason, he also added *Notes and Illustrations*, which he considered were 'necessary to the completion of the author's plan.'[42]

In the preface of *Medical Ethics*, Percival wished to reassure readers of this monograph, that it was complementary to, rather than a replacement of the previous works of two other authors on medical morality. The first he mentioned was Thomas Gisborne who had published *'An Enquiry into the Duties of Men'* in 1797, in which he included a chapter entitled *'On the Duties of Physicians'*.[43] Percival noted that Gisborne's chapter contained a reference to his own work or 'institutes' and added that because Gisborne's publication 'treats so largely of the duties of the faculty', it may appear 'to supersede the use of the present manual'. He stated the two publications 'differ not only in their plan, but in many of their leading objects; and it may be hoped they will rather illustrate than interfere with each other.'[44]

The second author Percival referred to was John Gregory who had published *Lectures on the Duties and Qualifications of a Physician* in 1772.[45] Percival wrote that 'the same remarks' as he had assigned to Gisborne, 'may be applied to the excellent lectures of Dr Gregory.'[46] Many of the topics previously addressed by Gregory and Gisborne were revisited by Percival. John Gregory's fundamental role in the development of *Medical Ethics* has tended to be overshadowed by that of its author Thomas Percival, although his important

[38] Percival, *Medical Ethics,* p.4.
[39] Percival, *Medical Ethics,* pp.115-134.
[40] Percival, *Medical Ethics,* p.4.
[41] Percival *Medical Ethics,* pp.4-5.
[42] Percival, *Medical Ethics,* p.4, pp.135-246,
[43] Gisborne, 'On the Duties of Physicians', pp. 132-198.
[44] Percival, *Medical Ethics,* pp.5-6.
[45] Gregory, *Lectures on the Duties and Qualifications of a Physician*, 1772.
[46] Percival, *Medical Ethics,* p.6.

place in the overall history of medical ethics has recently become more fully appreciated.[47] The conceptual underpinnings of *Medical Ethics* were based on Gregory's lectures.

Medical Ethics was made up of four chapters, each of which contained several codes focusing on specific topics. Chapter 1 focused on the professional conduct of surgeons and physicians working in hospitals or other medical charities. Chapter 2 was on professional conduct in private practice, and chapter 3 was on the conduct of physicians towards apothecaries. Chapter 4 concentrated on the medical practitioners' professional duties in those cases which required a knowledge of the law and could well be classified as medical jurisprudence.

Although the title page of the document mentioned only surgeons and physicians, the general principles of most of the codes were of relevance to surgeons, physicians, and apothecaries. However, given the differences in medical practice, some codes were of necessity of more significance to certain medical practitioners rather than to others.

The title of chapter 1 was *Of Professional Conduct, Relative to Hospitals or other Medical Charities,* and contained thirty-one codes, four of which were written specifically for surgeons. The first ten codes provided general guidance regarding the overall conduct and responsibilities involved in being a medical practitioner in a public hospital or similar medical charity.[48] Percival highlighted the importance of surgeons and physicians ministering to the sick with due awareness of the importance of their own office, and of displaying tenderness with steadiness (Code 1). He stressed the concerns patients might face when unable to get the medical practitioner of their choice (Code II), and the importance of being mindful of the patient's own feelings and emotions (Code III). He recommended the patient's illness should not be discussed in their presence, nor spoken about so loudly on a hospital ward that other patients might overhear the details, and of the importance of treating females with 'scrupulous delicacy'. (Codes IV & V). This was similar to Gisborne's recommendation to, 'not alarm the sick man, by discussing his case openly and unguardedly before him.'[49] Percival advised medical practitioners to be aware of the patient's spiritual needs (Code VI), the sensitivities involved in getting ill patients to make their will (Code VII), and that surgeons and physicians should not be constrained in prescribing the best wine and drugs, because of the benefits of their purity (Code VIII).[50]

[47] L. McCullough. 'John Gregory's Medical Ethics and the Reform of Medical Practice in Eighteenth-Century Edinburgh', pp. 86-92.
[48] Percival, *Medical Ethics,* pp.10-14.
[49] Gisborne, 'On the Duties of Physicians', p.159.
[50] Percival, *Medical Ethics,* pp.9-12.

Percival recommended that on admission to hospital, 'a proper discrimination' should be established between medical and surgical patients (Code XI). Although he did not provide any explanation for this, it was likely this was to ensure clear lines of primarily responsibility for the patient's care. He advocated new methods of surgical treatment where ordinary attempts had failed, provided that previous discussion had taken place between the surgeons and the physicians (Code XII).[51] Code XXIII contained seven recommendations specifically for surgeons and surgery. No operation should be decided upon without a prior consultation and agreement between the surgeons and the physicians, and that a patient having elective surgery should receive twenty-four hours' advance notice of their impending operation. He advocated the attending surgeon should comfort the patient and provide them with reassurance, provided this was consistent with the truth. He also recommended the operating theatre should be free from spectators and outside interference, and for silence to be observed during the operative procedures. He recognised the learning opportunities available in the operating theatre environment and suggested that surgeons from other institutions be invited to observe operative procedures.[52]

Percival's advice that the decision to operate should be made jointly by surgeons and physicians is somewhat surprising as by the time his *Medical Ethics* was published in 1803, surgeons had been operating without such consultations for some years and particularly so following their military experience. It is likely he was referring to those major cases where the risks involved in surgery was extremely high. Although Sir Astley Cooper later told his students in 1823 that physicians should not interfere with a surgeon's patients, he nevertheless pointed out 'that one profession was not to be upheld at the expense of another; they should mutually assist in the great duty of preserving human existence.'[53]

Percival considered the practice of a surgeon who limited his operating in the hospital to one fixed day each week as unacceptable to the patient, because it caused improper delays and unjustifiable anticipation. Furthermore, he considered this practice would result in several operations taking place on that same day, leading to greater agitation by those patients who were waiting to be called to the operating theatre, as they observed the experiences of those preceding them to surgery. Whilst this was an admirable recommendation, it was also aspirational, as surgeons then performed few operations and 'one afternoon was enough for all the operations of the week, apart from those of emergency.'[54] He also recommended the surgeon should change his blood-smeared apron

[51] Percival, *Medical Ethics,* pp.14-15.
[52] Percival, *Medical Ethics,* pp.21-23.
[53] Cooper, 'Surgical Lectures', *The Lancet*, 1, 1 (1823), p.8.
[54] I. Loudon, *Medical Care and the General Practitioner,* p.75.

to a fresh one before each operation and conceal his instruments from view, to reduce the likelihood of the patient's fear and anxiety (Code XXV).[55] These codes demonstrate Percival's commitment to improving the surgeon-patient relationship as well as the overall care and protection of the patient.

The major focus of the remaining codes (IX, X, XIII, XVI, XVII, XVIII, XXII) in Percival's first chapter focused on the relationships between individual medical practitioners.[56] He believed that medical colleagues were responsible for each other's reputation and should not make a professional charge against another, until first discussing their concerns with the faculty. They should also keep these criticisms and ensuing deliberations out of the public arena. Percival pointed out the benefits to be gained by surgeons and physicians sharing in the management of patients, and of communicating across disciplinary boundaries about interesting and rare cases or operations. In addition, he described innovative ways to achieve this. In the new practice environment of the expanding hospitals, this was most likely to avoid disputes before they got out of hand and spilled into the public arena. It is probable he was also hoping this would generate greater collegiality and better relationships across the different medical orders.

In conclusion, this first chapter contained a series of codes which related directly to the ethics of the doctor-patient relationship. It also included others which could be classified as etiquette, because they applied more to the relationships between individual medical practitioners.

In chapter 2, *Of Professional Conduct in Private, or General Practice*, Percival reaffirmed the importance of the moral rules of conduct in the practice of surgery and medicine both outside as well as inside the hospital. He stressed the importance of every case being treated with 'attention, steadiness and humanity', and with the observation of secrecy and delicacy when required (Code I). He also placed great significance on the importance of temperance (Code II).[57] He advised against making disheartening forecasts, and believed it was the surgeon's or physician's role to offer hope and comfort to their patients (Code III). He recommended that timely notice of alarm should be given to a seriously ill patient, but because this might frighten the patient if executed by his attending doctor, it should be more appropriately assigned to a different but suitable medical practitioner (Code III).[58] In the extensive accompanying *Notes and Illustrations* relevant to

[55] Percival, *Medical Ethics,* pp.21-23.
[56] Percival, *Medical Ethics,* pp.14-21.
[57] Percival, *Medical Ethics,* pp.30-31.
[58] Percival, *Medical Ethics,* pp.31-32.

this code, Percival added that Thomas Gisborne's had suggested adding "as far as truth and sincerity will admit" to messages of hope and comfort.[59]

Percival acknowledged that the interference by one practitioner in the care of another's patients was a problem which required resolution. Providing second opinions or consultations, either at the request of the clinician or by the patient themselves, had by then become common place. Percival developed seven codes to help guide appropriate behaviour between medical practitioners regarding such consultations, including his overall advice not to meddle in another practitioner's patients (Codes IV, V, VI, VII, VIII, IX, X). These codes recognised that the failure of a previous doctor's treatment might help to exclude certain conditions and therefore be of benefit to the second practitioner in terms of making a diagnosis. He advocated for joint consultations when faced with difficult or challenging cases, in the expectation that this would benefit the patient and increase the personal knowledge and confidence of both practitioners involved and avoid competition or jealousy.[60] These guidelines reinforced the advice Percival had given in his first chapter regarding the benefits of medical practitioners working together for the good of the patient and in avoiding misunderstandings. It was probably this focus on intra-practitioner relationships that led Leake and others to label Percival's *Medical Ethics* as more about etiquette than about ethics.[61]

Percival pointed out that one of the most challenging consultations related to attending the wife or child of a member of the faculty, or of a person connected, and made several relevant recommendations (Code XVII). He warned the surgeon or physician to be aware that 'the mind of a husband, a father, or a friend, may receive a deep and lasting wound, if the disease terminate fatally, from the adoption of means he could not approve, or the rejection of those he wished to be tried'.[62] In these delicate situations, Percival advised the medical practitioner to 'not lightly sacrifice his judgement … [but to urge] the measures he deems to be expedient … [before leaving] the final decision concerning them to his more responsible coadjutor.'[63] Percival wished to ensure that after the illness was over, either in recovery or in death, the doctor relative would not be left in anger or distraught by having had his opinion or wishes ignored or dismissed.

[59] Percival, *Medical Ethics,* pp.156-168.
[60] Percival, *Medical Ethics,* pp.32-39.
[61] Leake, *Percival's Medical Ethics*, p.71.
[62] Percival, *Medical Ethics,* p.42.
[63] Percival, *Medical Ethics,* p.42.

Percival advised that visits to the sick should not be repeated unnecessarily as these would reduce the physician's authority (Code XIII).[64] However, he disagreed with the British politician and diplomat Sir William Temple (1628-1699), who had earlier asserted that:

> an honest physician is excused for leaving his patient, when he finds the disease growing desperate, and can by his attendance, expect only to receive his fees, without any hopes or appearance of deserving them.[65]

Percival did not consider this well founded and regarded further visits might be useful to the patient and comforting to the relatives surrounding him.[66] This was similar to Gisborne's recommendation that a physician should not desert his patient when there were no longer any remaining hopes of recovery, as pain might be mitigated, and his presence helpful to friends and relatives.[67]

Percival regarded the contemporary practice of charging fees as contentious and worthy of a separate code. He recommended that as a general rule, charges should be adopted in every town, and listed individuals or classes of people who should be exempted from fees including colleagues, their families, and the clergy (Codes XIV, XV, XVI, XVIII, XIX, XX, XXV).[68] Percival warned about the practice of overcharging and was in agreement with Gisborne who had warned doctors against covetousness and about the presence of some 'avaricious men' in the medical profession.[69]

He recommended that in the major cities or towns, the distinction between surgery and medicine should be maintained because of the different nature and objectives of the two professions, and the separate education and training requirements involved. Furthermore, each profession should limit their practice to their own discipline (Code VI).[70] Percival was addressing those practitioners who consulted outside their designated discipline and charged fees accordingly. This did not negate his earlier recommendation that surgeons and physicians should co-operate and confer on complex cases.

Throughout *Medical Ethics,* Percival revisited the importance of education and experience, and reaffirmed in this chapter his support for a regular academic education both as presumptive evidence of 'professional ability' and of its attainment (Code XI).[71] He also

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[64] Percival, *Medical Ethics,* pp.38-39.
[65] The Works of Sir William Temple, Bart, Complete in Four Volumes', vol iii, Section 11, S. Hamilton, London, 1814. p.48.
[66] Percival, *Medical Ethics*, pp.38-39.
[67] Gisborne, 'On the Duties of Physicians', p.167.
[68] Percival, *Medical Ethics,* pp.39-44; p.47.
[69] Gisborne, 'On the Duties of Physicians', pp.157-158.
[70] Percival, *Medical Ethics,* pp.33-34.
[71] Percival, *Medical Ethics,* pp.37-38.

reminded surgeons and physicians of their responsibilities as members of a fraternity, their obligation to promote the honour and interest of the association or organization, and to guard against whatever may injure the 'general respectability of his profession' (Code XXIII).[72] It was perhaps this code which led Berlant to regard Percival's *Medical Ethics* as extending the monopolistic controls of the Colleges. This code is the nearest to the covenant in the Hippocratic Oath, which stated the swearer's duties to the profession. In Percival's code, however, it was through a 'tacit compact' rather than by the swearing of an oath.

Percival promoted reflective practice by advocating a dispassionate reflection on the management of every 'interesting and important case' (Code XXVIII).[73] This advice and the discussion that accompanied it, were intended to help the medical practitioners to learn from their experience in managing each patient and was similar to the advice offered by Gisborne to medical students.[74]

Percival showed a sympathetic attitude to those patients who wished to use what he referred to as quack medicines. Although he discouraged the practice, he called for an understanding as to why patients might wish to do this, and the importance of not abandoning the care of those patients who did so (Code XXI).[75] This advice was like that given by Gregory. The importance of sharing new advances or treatments amongst colleagues was reflected in his recommendation that 'no physician or surgeon should dispense a secret nostrum … if it be of real efficacy, the concealment of it is inconsistent with beneficence and professional liberation.' (Code XXII).[76] This reaffirmed a similar recommendation made earlier by Gisborne.[77]

Percival advised that practitioner disputes should be referred to the arbitration of a sufficient number of surgeons or physicians and for the outcome not to be communicated to the public (Code XXIV).[78] This was like Code XXIII and reflected his wish to keep these disputes out of the public arena and to protect the professional status of the practitioners involved and to maintain the confidence of the public in the medical profession.

Percival demonstrated an insight into the sensitive topic of timely retirement for medical practitioners and especially so for surgeons. Gisborne had earlier advised, 'let him retire his post in time to his successors, and not strive in the wane of his strength and

[72] Percival, *Medical Ethics,* pp.45-46.
[73] Percival, *Medical Ethics,* pp.48-49.
[74] Gisborne, 'On the Duties of Physicians', p.138.
[75] Percival, *Medical Ethics,* pp.44-45.
[76] Percival, *Medical Ethics,* p.165.
[77] Gisborne, 'On the Duties of Physicians', p.138.
[78] Percival, *Medical Ethics,* p.46.

faculties to retain his practice.'[79] Considering aging and the associated decay of faculties, Percival provided guidance on how to recognise deterioration, acknowledge help, and consider retirement (Codes XXXI & XXXII).[80] In focusing specifically on the surgeon, Percival wrote:

> this rule of conduct is still more necessary. For the energy of the understanding often subsists much longer than the quickness of eye-sight, delicacy of touch, and steadiness of hand, which are essential to the skilful performance of operations.[81]

In chapter 3, *Of the* Conduct *of Physicians towards Apothecaries*, Percival acknowledged the medical profession was divided into three divisions. In (Code I), he described the connection between the physician and the apothecary as 'peculiarly intimate' and that 'various obligations necessarily result from it.'[82] He acknowledged the important professional role played by the apothecary in the early diagnosis and ongoing care of a patient in the community (Code II) and provided advice on how this could be protected and supported by physicians.[83] He was concerned about the erosion of apothecaries' practice, status, and income by the other medical practitioners. Further evidence of this was reflected in the support he provided for the formation of benevolent institutions to provide funds to support the widows and children of apothecaries. He recommended that 'such schemes merit the sanction and encouragement of every liberal physician and surgeon.' (Code IX).[84] Gisborne had similarly referred to the conduct which should be observed 'towards persons who occupy inferior departments in the medical profession.'[85]

The title of chapter 4 was, *Of Professional Duties in Certain Cases which Require a Knowledge of the Law***.** Here Percival provided the reasons why medical practitioners should be conversant with the law and included examples to illustrate this point. He first discussed the issues surrounding the capacity of a patient to make a will (Code II).[86] He then outlined the role of the physician in certifying a person for incarceration in a lunatic asylum and in their subsequent care and protection, with the latter being mainly the responsibility of the surgeons (Codes III, IV, V).[87]

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[79] Gisborne, "On the Duties of Physicians', p.182.
[80] Percival, *Medical Ethics,* pp.50-52.
[81] Percival, *Medical Ethics,* p.52.
[82] Percival, *Medical Ethics,* p.53.
[83] Percival, *Medical Ethics,* pp.53-59.
[84] Percival, *Medical Ethics,* pp.60-61.
[85] Gisborne, 'On the Duties of Physicians', p.152.
[86] Percival, *Medical Ethics,* pp.63-66.
[87] Percival, *Medical Ethics,* pp.67-61.

Percival devoted twenty pages to codes which provided advice and guidance to surgeons and physicians who might be requested to give an opinion as to the likely cause of death. This included the sudden death of an adult, child or baby, and whether this might have been a natural death, suicide, or one caused by an accident or violence (Codes VI, VII, VIII, IX, X, XI).[88] In these codes Percival explained what was meant by the term's justifiable homicide, excusable homicide, suicide, manslaughter, and murder, and situations when a surgeon or physician might be required to give an opinion. He also discussed the cases of death, occasioned by drugs designed to produce an abortion and the importance of ensuring with great certainty that an abortion had been procured.

Duelling was regarded by Percival as another form of felony, and he considered that surgeons who became involved as professional attendants would likely be regarded by the Courts as accomplices, and therefore guilty of murder if death ensued (Codes XII, XIII, XIV). He recommended surgeons should consider these consequences before they agreed to attend a duellist in the field of combat.[89] Percival included a specific code on the crime of rape in this chapter (Code XVI) because 'the inspection of a surgeon is often required to ascertain the reality of alleged violence, … [adding] his testimony should be given with all possible delicacy, as well as with extreme caution, … as external signs of injury may originate from disease.'[90]

Percival devoted six pages to Code XI which focused on the predicament faced by an unmarried mother whose concealment of the birth and death of her child was regarded as presumptive evidence of infanticide. He reminded medical practitioners that after a still-birth or a neonatal death occurred, the baby's mother might have concealed the event out of shame and pointed out the difficulties in deciding which of these had occurred (Code XI).[91] Percival demonstrated a singular sensitivity, understanding and defence of any woman who found herself in this situation.

In the final three codes (XVIII, XIX, XX), Percival reminded medical practitioners of their responsibility to give evidence when requested, and of the need to do so without passion and in a true, consistent, and clear language. He cautioned that although the faculty must support the law, they also had a responsibility to make every effort to help avoid a wrongful conviction.[92]

[88] Percival, *Medical Ethics,* pp.71-86.
[89] Percival, *Medical Ethics,* pp.87-95.
[90] Percival, *Medical Ethics,* pp.102.
[91] Percival, *Medical Ethics,* pp.99-103.
[92] Percival, *Medical Ethics,* pp.106-114.

Messages in *Medical Ethics* for surgeons and surgery

What then were the specific messages which Percival included in *Medical Ethics* for surgeons and surgery? Analysis of the first two chapters confirms that Percival developed several codes relating to the interactions between the surgeon and his patient and, that like Gregory, he based his approach from the perspectives of the patient. Foremost amongst his recommendations was the importance he gave to the need for surgeon to recognize the feelings, emotions, sensitivities, spiritual needs, and apprehensions of their patients. He highlighted the importance of protecting the privacy of the patient in all discussions and for the surgeon to comfort and provide them with reassurance, provided this was consistent with the truth. He advocated for the avoidance of unnecessary alarm or apprehension which might be caused by delays in elective surgery, and that the patient should be given advance notice of the time of their operation. He also called upon the surgeons not to wear blood-stained aprons or display their surgical instruments to reduce patients' anxieties.

Percival recommended that in the major cities and towns, each order of the profession should limit their practice to their own discipline. Importantly, he acknowledged surgery was an independent profession which differed from medicine in its nature, objectives, education, and training requirements. He recognized that surgical knowledge and skills were increasing, and that surgery was expanding as a method of treatment for a broader spectrum of diseases. He recommended that when patients were being admitted to hospital, there should be a clear differentiation between those with surgical conditions and those with medical illnesses. He recognized the operating theatre as an area set apart from the rest of the hospital, from which the public should be barred, and a place of silence, decorum, and education. Although he recommended the decision to operate should be made jointly by the surgeon and the physician, it is likely this related to the most major cases where the significant risks of surgery had to be balanced against adopting a non-surgical approach. He advocated for patients to be properly scheduled for elective surgery to avoid prolonged waiting and to reduce their anxiety. These findings confirm that Percival formulated ethical codes for surgeons, contrary to the views made by Namm and his colleagues in 2014.[93]

The findings from this study refute Warrington's assertion that Percival provided 'little advice on how to cope with specific problems in the doctor-patient relationship.'[94] On the other hand they do support Waddington's suggestion that some of Percival's statements on the differences between surgery and medicine were to protect the contemporary tripartite system.

[93] J. Namm, M. Siegler, C. Brander, et al, 'History and Evolution of Surgical Ethics, p.1569.
[94] Waddington, *The Development of Medical Ethics,* p.39.

Percival's second major focus was on the relationships between individual medical practitioners. The development and expansion of hospitals in the eighteenth century brought surgeons, physicians, and apothecaries into closer professional contact and this required greater collaboration in the day-to-day management of patients. At the same time, the greater availability of medical practitioners in the community provided patients with a wider choice of practitioner and the ready opportunity to seek second opinions. When this occurred and the medical management was changed by the new practitioner without consulting the first clinician, or if negative comments were made on the advice given by others, it would in the opinion of Baker, be regarded as a personal affront to the offended practitioner's honour and even interpreted as slander.[95] This was because traditionally, personal accountability for the care of a patient was tied to the personal honour of the attending medical practitioner, and any criticism regarding diagnosis or management was interpreted as an insult to such honour, leading to disputes and even hostile methods being used to defend and protect this honour.[96]

Percival advocated a collaborative decision-making process for avoiding and resolving such disputes. Where differences of opinion occurred and before any major change in a patient's treatment plan was decided, Percival recommended that a formal meeting should be organised and be open to any practitioner with an interest in the case being discussed. Each practitioner should be invited to state their views at this conference and after a frank and open discussion, the majority opinion would be decisive, and the treatment plan advised should be adopted. As pointed out by Baker, this solution of disputes involved:

> the suspension of hierarchy, the substitution of consultation for individual judgements, and the use of the hospital faculty as a board which sets medical policy and provides a venue for the arbitration and adjudication of intra-practitioner disputes.[97]

This process was one of resolution through discussion and not as suggested by Waddington, a reinforcement of hierarchical control. It was also the forerunner of what was later to become known as the 'Hospital Grand Round', where the management of patients could be openly discussed and where doctors including surgeons could publicly admit to their mistakes.[98]

[95] Baker, 'Deciphering Percival's Code', p.203.
[96] Baker, 'Deciphering Percival's Code', p.202.
[97] Baker, 'Deciphering Percival's Code', p.206.
[98] C. Bosk, *Forgive and Remember: Managing Medical Failure*, University of Chicago Press, Chicago, 2003.

Percival proposed a new concept of managing the personal accountability of the practitioner when the majority decision was different to his own or when an error had taken place. He recommended that after considering the intent and consequences of the practitioner's actions, an erroneous outcome could be forgiven provided the practitioner reviewed the case, admitted his errors, and gave an assurance not to repeat the mistake.[99] In this way, the honour of the practitioner was not harmed. However, should the individual practitioner refuse to admit his error or repeat his mistake, serious consequences for his reputation would eventuate. Baker noted that in this way Percival:

> broke away from first-person approaches to medical morality … [and] ground professional duty in a societal-professional contract which permitted and encouraged collaborative practice, regulated by the profession itself through its representatives, the faculty/staff of a teaching hospital.[100]

This was a fundamental change in medical practice from individualistic responsibility and the defence of personal honour at all costs, to a more collaborative approach to patient care. In this way, Percival transformed the burden of singular consultations, diagnosis, and management to one of shared responsibility and perhaps this was one of his greatest legacies. In so doing, he also addressed Gregory's concerns about the medical practitioner having to rest on his own judgement as discussed in Chapter 3.[101]

The question as to whether Percival's *Medical Ethics* was more about etiquette than ethics as suggested by Leake, Waddington, Berlant and others has been reviewed and refuted by Robert Baker, Chester Burns and Edmund Pellegrino, as discussed earlier in this chapter. This review confirms their views on the importance Percival gave to the doctor-patient relationship in the codes written specifically for this purpose. This was well summarised in 1990 by the Canadian family physician and ethicist Gerald Higgins in his observation that:

> what is at stake is the well-being of the patient: to ignore the rules of inter- and intraprofessional conduct is to be indifferent to the intertest of the patient – which is, or should be, paramount.[102]

[99] Baker, 'Deciphering Percival's Code', p.207.
[100] Baker, 'Deciphering Percival's Code', p.208.
[101] Gregory, *Lectures on the Duties and Qualifications of a Physician,* p.17.
[102] G. Higgins, 'Professionalism: Ethics vs Etiquette', Canadian Family Physician, 36, (1990), pp.1946-1948.

Leake and his colleagues were correct in so far as some of the codes were more about etiquette than about ethics, but this did not warrant describing Percival's term 'medical ethics' as a misnomer.

Response to the publication and circulation of *Medical Ethics*

The focus of this chapter so far has been on the development of codes of medical ethics and the identification of the messages which applied specifically to surgeons and surgery and which could be used as reference standards to guide their behaviour and self-regulation. Although *Medical Ethics* was circulated widely, confirmatory evidence of its direct influence in Britain is hard to come by. This is different to North America where it was 'immediately treated as authoritative.'[103] Ivan Waddington considered *Medical Ethics* as the most famous of a number of publications by English practitioners in the first half of the nineteenth century, although as Pickstone noted, he did not give many examples of the others.[104] Waddington did in fact refer to *Medical Science and Ethicks* (1837) by the ex-naval surgeon and Bristol practitioner William Porter (1774-1850), and to *Medical Etiquette* (1839) by the London surgeon Abraham Banks.[105] Porter's comments were well received and recommended to medical students but the publication by Banks received unfavourable reviews. There is no evidence to suggest that either of these publications were influential. Dorothy Porter and Roy Porter referred to Thomas Percival's monograph as 'influential *Medical Ethics*'.[106] Burns cited a letter written by Percival's grandson James Hayward in 1848, to a member of the American Medical Association, in which he expressed his belief that in England, 'my grandfather's Medical Ethics are generally looked upon as a standard work on that subject.'[107]

On the other hand, Manchester historian John Pickstone considered *Medical Ethics* was not much used in Britain during the early nineteenth-century.[108] Similarly, Baker stated that with the exception of Manchester Infirmary, Percival's codes never functioned in Britain as a professional ethic in the orthodox sociological sense.[109] Furthermore, he cited the

[103] R. Baker, 'The History of Medical Ethics', in: W. Bynum, R. Porter, eds., *Companion Encyclopedia of the History of Medicine*, Vol 2, Routledge, London, 1993, pp.852-888.
[104] Waddington, 'The Development of Medical Ethics', pp.36- 37; Pickstone, 'Thomas Percival and The Production of Medical Ethics', p.162.
[105] W. Porter, *Medical Science and Ethicks: An Introductory Lecture Delivered at Bristol Medical School,* Charles Fox, London, 1837; A. Banks, *Medical Etiquette; or an Essay Upon the Laws and Regulations, which Ought to Govern the Conduct of Members of the Medical Profession in their Relation to Each Other*, Charles Fox, London, 1839.
[106] Porter, Porter, *Patient's Progress*, p.19, p.27.
[107] Letter from James Haywood to Issac Hays, cited in C. Burns, 'Reciprocity in the Development of Anglo-American Ethics', p.306, footnote 8.
[108] Pickstone, 'Thomas Percival and the Production of Medical Ethics', p.162.
[109] Baker, 'Deciphering Percival's Code', p.191.

anonymous editor of the 1827 edition of *Medical Ethics* as underlining the status of Percival's work as 'a code of ethics *offered* to, but never accepted by, the British medical profession.'[110] Burns observed that despite Percival and Gregory being influential writers on medical morality and ethics, no professional code of ethics was formally accepted by any of the national medical organisations in Britain by the 1860's.[111] This is somewhat surprising given Percival's widely known interest in ethics, and his consultative and collaborative approach to the development of what was a syncretic work based on the amalgamation of the thoughts and writings of a broad selection of contributors.

A helpful insight into the status of medica ethics in the early nineteenth century was provided by the contemporary London physician Michael Ryan (1800-1840), whose writings have been somewhat overlooked until recently.[112] In his *Manual of Jurisprudence, Compiled from the Best Medical and Legal Works* and published in 1831, Ryan stated that Gregory's work had 'justly received the universal approbation of the profession for more than half a century, … [and] Dr Percival's valuable and truly classical work, completed what Dr Gregory had omitted.'[113] He lamented the teaching of ethics was almost totally neglected in the medical schools, and added that:

> there is no code of ethical institutes to be referred to, … the moral statutes and obligations which are required by some of our colleges are so few, and so little known, that they are mainly useless; they are seldom observed, obeyed, or enforced.[114]

Ryan acknowledged the only works available on the subject were those of Gregory and Percival. However, he noted these were no longer 'deemed authority', because Gregory's monograph had been published over half a century previously, and Percival's was 'prior to the changes made in the constitution of the profession by recent legislation – and both were unsuited to the state of the profession at the present time.'[115] I presume he was referring to the Apothecaries Act 1815. He considered that the only other relevant material on the subject were 'the oaths required by one or two of our colleges, and the moral statutes sanctioned by them.'[116] What is striking is his lack of mention of the Hippocratic Oath or

[110] Baker, 'Deciphering Percival's Code', p.191.
[111] Burns, 'Reciprocity in the Development of Anglo-American Medical Ethics', pp.300-307.
[112] H. Brody, Z. Meghan, K. Greenwald, eds., *Michael Ryan's Writings on Medical Ethics*, Springer, Dordrecht, Netherlands, 2009.
[113] M. Ryan, *A Manual of Jurisprudence, Compiled from the Best Medical and Legal Works*, Renshaw and Rush, London, 1831, pp.39-40. http://archives.org/details/b20443705, Accessed repeatedly between 2018 and 2020.
[114] Ryan, *A Manual of Jurisprudence,* p.38.
[115] Ryan, *A Manual of Jurisprudence,* p.38.
[116] Ryan, *A Manual of Jurisprudence,* p.39.

Hippocratic ethics, as similarly had occurred in the writings of Gregory, Gisborne and Percival.

The oaths or moral statutes of the colleges Ryan referred to were those of the Royal College of Physicians of London and the Royal College of Surgeons of London. In 1831 the Royal College of Physicians required certain 'promises' from its members, fellows, and licentiates and prescribed a code of ten moral statutes in its *Moral and Penal Statutes*. The content and language used in some of these statutes related to the behaviour of physicians during consultations, and between each other, and reflected the influence of Gregory and Percival. The other statutes referred to the physicians' obligations to the College. An oath was required by the Royal College of Surgeons of London in the same year and focused predominantly on the responsibilities of a member to the College. The only words which related to the behaviour of member surgeons were, 'you will demean yourself honourably in the practice of your profession.'[117] Neither of these two royal colleges drew up ethical codes for its members.

Ryan indicated that in preparing his monograph, he would use materials from all available sources and identified as important the 'valuable observations of two able and distinguished professors of the London University, Dr A.T. Thomson and Dr Gordon Smith, on the importance of ethics, … [and] the opinions of Sir Astley Cooper, Dr Baillie, Dr Parry and Mr Brodie, … as the strongest advocates of [this] branch of education.'[118] Cooper and Brodie were two of the most influential surgeons at that time. Ryan who was a member of the Royal College of Physicians of London, stated that his motivation in the making the College's statutes public was in the hope of adding 'to the honour and dignity to the profession', and that if these were duly observed, they would 'extinguish that base and unprofessional and ungentlemanly behaviour, which of late, … has debased and degraded the profession.'[119]

Although Ryan extolled the virtues of medical ethics and the benefits of making them known to the medical profession, Burns has observed that no one claimed that such codes guaranteed medical righteousness. Whilst the codes did provide medical practitioners with some knowledge of the differences between right and wrong professional behaviour, but without 'some ideals and some means of institutionalizing them, there would be little chance to alter professional evils anywhere.'[120]

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[117] Ryan, *A Manual of Jurisprudence,* pp.53-56.
[118] Ryan, *A Manual of Jurisprudence,* p.41.
[119] Ryan, *A Manual of Jurisprudence,* pp.54-55.
[120] Burns, 'Reciprocity in the Development of Anglo-American Medical Ethics', p.305.

But Gregory and Percival did provide desirable ethical, moral, and principled ideals and articulated the attributes of sympathy, humanity, generosity, compassion, and others that should be embraced and displayed by medical practitioners during their encounters with patients. As well as the lack of a means to implement such codes, there may also have been a lack of will. The British Medical Association attempted to develop a code of ethics, but the two committees established to do so both faltered. As to why this was the case, Burns may have been correct in writing that, 'perhaps the British practitioners understood the problems of enforcement and compromised freedom inherent in codes.'[121] The overriding focus amongst medical practitioners at that time was about the protection on their sector interests rather than on the implementation of ethical codes.

It was not until the passing of *The Medical Act 1858* which established the General Council of Medical Education and Registration of the United Kingdom, commonly known as the General Medical Council (GMC), that a formal mechanism became available for upholding standards through the establishment of the Medical Register and professional regulation.[122] This Act united the three previously independent groups of physicians, surgeons and apothecaries into 'one profession by subjecting them to the authority of a General Medical Council'.[123] By the time this Act was implemented, 'the objectively validated, universally recognised and legally protected occupational title had become the hallmark of professional status.'[124]

Percival's *Medical Ethics* was a significant milestone in the development of standards of behaviour for medical practitioners, but the findings from my analysis agrees with those of others regarding the lack of evidence of its direct influence on the day-to-day practice of medicine in Britain at that time. The only reference made by a surgeon to the topic of medical ethics that I could find was that by Fredric Skey in his 1850 *Operative Surgery*. Skey wrote that 'operative surgery not infrequently involves interesting questions of medical ethics.' and illustrated this with three patient scenarios, two of which were ethical issues and the third which related to etiquette.[125] Ryan cited discussions which took place by Sir Astley Cooper and others on ethical issues which had arisen in the management of certain patients, but no direct reference was made by these practitioners to existing 'ethical codes.'[126]

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[121] Burns, 'Reciprocity in the Development of Anglo-American Medical Ethics', p.305.
[122] Medical Act 1858, www.legislation.gov, accessed during 2018-2020.
[123] M. Morgan, *Manners, Morals and Class in England, 1744-1858*, The Macmillan Press LTD, London, 1994, p.134.
[124] Morgan, *Manners, Morals and Class in England*, pp.134-135.
[125] Skey, *Operative Surgery*, pp.12-13.
[126] Ryan, *A Manual of Jurisprudence,* p.41.

One of Percival's greatest contributions was the provision of a structure in which medical practitioners could work more closely together in the changing pattern of the patient care environment. It enabled them to share the responsibility for the diagnosis and management of difficult cases, and importantly to do so without any personal loss of status or honour. This provided an answer to Gregory's concerns about the absence of advice from an independent group in doubtful or complex cases.[127]

Although there is a lack of direct evidence on the contemporary influence of *Medical Ethics,* the respected American physician and moralist Edmund Pellegrino and an expert on medical ethics as well as on Thomas Percival, agreed with the sentiments of Baker that Percival's influence was far reaching and one that transcended his time.[128]

Conclusion

The aims of this chapter were to examine how the principles and attributes of professionalism established predominantly by John Gregory were subsequently codified by Thomas Percival into standards of behaviour defined in a series of ethical codes, and to search these codes for specific advice or direction he provided to guide the behaviour and self-regulation of surgeons. The chapter commenced with an analysis of Percival's motivation to write his *Medical Ethics*, followed by a review of its development, content, and publication. An investigation on why this landmark monograph on medical ethics was not more widely implemented in Britain completes the chapter.

Events at the Manchester Infirmary in the late eighteenth century brought to a head the need for guidance on the appropriate behaviour of medical practitioners, particularly surgeons. The Manchester physician Thomas Percival was invited to develop a code of conduct for clinicians at the Infirmary and encouraged by its successful implementation, he revised and expanded its content and published the completed work as *Medical Ethics* in 1803.

Examination of each code has confirmed that Percival focused on the relationship between a medical practitioner and his patients, and with other practitioners and hospital administrators, and provided ethical guidelines based on the attributes of professionalism for satisfactory surgeon-patient interactions. Moreover, he recognised and supported the development of surgery as a profession by acknowledging its specialised body of knowledge and expanding surgical procedures and provided the necessary codes to enable it to self-

[127] Gregory, *Lectures on the Duties and Qualifications of a Physician*, p.117
[128] Pellegrino, 'Percival's Medical Ethics', pp.2265-2269;
Baker, 'Deciphering Percival's Code', pp.179-211.

regulate as a profession. Percival's codes empowered surgeons to consult more freely with their colleagues and share responsibility for patients. He also provided a mechanism through which errors or mistakes could be admitted and addressed without the loss of personal honour.

Medical Ethics was accepted in Manchester, but there is little evidence to show that it was implemented elsewhere in Britain. While it is possible that its availability may have influenced the behaviour of individual practitioners, it was never formally accepted by the leading medical corporations, colleges, or professional organisations. The possible reasons for this in the tumultuous first half of the nineteenth century have been discussed. Whether the subsequent behaviour of surgeons during their interactions with patients was in keeping with these new standards can only be answered by examining the perspectives of the patients on these encounters. This will be investigated in the next chapter.

Chapter 5

Patients' Stories of Sickness and Encounters with Surgeons

Introduction

In January 1828, the following news item from an anonymous medical practitioner appeared in *The Times* under the heading 'Fortitude':

> With the exception of naval and military men, there is no class of the community who witness more examples of fortitude and personal courage than the practitioners of surgery. What greater proof can be given of confidence and courage, than that with which a person surrenders himself, blindfolded, and bound hand and foot, to the knife of the operator. Every day in the week, this great metropolis produces, in silence and in secrecy, acts of heroism, of strength of mind, and firmness of purpose, that would do honour to an ancient Roman.[1]

And yet, despite the growing historical interest in the personal experiences of patients, there remains a lack of information on their encounters with surgeons during consultations and surgery. As pointed out in Chapter 1, it was not until the rise of the new discipline of the social history of medicine in1986 that this began to change. Dorothy Porter and Roy Porter noted that available sources from patients are more abundant and revealing of individual encounters than the writings left by doctors 'which rarely go beyond notes of diagnosis and treatment and are mainly in standardised form, following conventions governing medical perception and practice.'[2] Furthermore, these authors cited case-books from two hospitals which demonstrated how these case-notes occasionally tell us much about the patient's medical history, 'but next to nothing about the practitioners' attitudes … and the clinical encounter as a whole.'[3]

For these patients, encounters with surgeons involved consultations, diagnoses, and treatment with the latter occasionally involving surgery. This would have resulted in emotional and physical distress during which the patient's perception of events and as pointed out by Gregory, the behaviour of the surgeon would have influenced how well they coped with these experiences. One of the arguments I put forward in Chapter 1 was that the professionalization of surgery involved surgeons embracing the necessary standards of

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[1] *The Times*, London, 9 January 1828, p. 3, Issue 13484.
[2] Porter, Porter, *Patient's Progress,* pp.13-14.
[3] Porter, Porter, *Patient's Progress,* p.14, 'Willis's Oxford Casebook (1650-1652)', in K. Dewhurst, ed., *Sandford Publications, Oxford, 1981*; S. Anning, 'A Medical Case Book, Leeds', 1781-84, *Medical History*, 28 (1984), pp.420-431.

behaviour and ethical codes for a satisfactory surgeon-patient interaction and for their own self-regulation.

The aims of this chapter are to examine this claim by seeking to establish from patients' stories whether surgeons demonstrated professionalism during these encounters. Although the patients' perception of events in terms of the professionalism of their surgeons are the primary focus of this chapter, standards of their care will also be examined to establish whether they were in keeping with those of an educated, trained, and scientific professional occupation according to the precepts of the time. I am aware of the dangers of presentism in the retrospective analysis of surgical management which occurred two hundred years ago and will be mindful of this in my analysis.

To obtain the patients' perceptions of their experiences with surgeons and surgery, it is necessary to review their personal accounts of these encounters. These took place face-to-face or occasionally by post. As a result of increased literacy, education, affluence, and the expansion of surgical practice in the late eighteenth and early nineteenth century, women and men increasingly sought the opinions of surgeons with notable reputations often far removed from their own place of residence. Although the industrial revolution enhanced the wealth of many, travel remained difficult until the railways were established around the 1840s. Consultations by post therefore became more common and usually involved the person who was seeking advice writing directly to an eminent surgeon, describing their symptoms and the details of their own physical findings, for example a lump in the breast. Occasionally, family members or the patient's local surgeon-apothecary would write on their behalf to a surgeon.

In his reply, the surgeon usually provided a diagnosis, advice on overall management, and enclosed a prescription to be prepared by the patient at their home or by a local apothecary depending on its complexity. If surgery was recommended and the patient agreed, this might be performed by the eminent surgeon or by their local surgeon-apothecary. In the former case, the surgeon might expect the patient to keep him informed of their subsequent progress. In either event, the patient's local surgeon-apothecary would most likely remain involved and if problems arose, he might seek further advice from the eminent surgeon and especially if the patient requested him to do so. Patients also reserved the right to correspond directly with the eminent surgeon and occasionally some chose to travel long distances for their follow-up.

In their account and examples of postal consultations, Dorothy Porter and Roy Porter, stated that patients' expectations from postal consultations were 'better medication, … a

better diagnosis – which might be a more favourable one, or simply one upon which the sick person felt he could rely.'[4] These consultations by letter gave patients access to a more experienced although geographically distant practitioner. Surgeons and physicians were cautious when advancing postal diagnosis as this meant relying on what the patient wrote in their letter rather than in a face-to-face conversation. However, these consultations enhanced the reputation of the eminent surgeons and provided them with a more lucrative practice. In addition, because a first consultation by letter was considered to 'impose much more trouble and attention than a personal visit', the established practice was to expect a gratuity of double the usual amount. Subsequent fees were based on the circumstances of the case or of the patient.[5]

Methodology

To further understand the nature of the surgeon-patient encounter, a search was made for the personal stories of those patients who consulted surgeons and those who went on to have surgery during the era of my study. This comprised a search of contemporary surgical textbooks, monographs, medical journals, newspapers, popular magazines, and of surviving correspondence between patients and their surgeons. A preliminary search for personal diaries which might contain relevant information failed to discover any positive leads. Site visits were made to undertake manual searches of the archival collections held by the Royal College of Surgeons of England in London, the Royal College of Surgeons in Ireland in Dublin, and the Royal Australasian College of Surgeons in Melbourne. Internet searches were made of the Collections held by the Royal College of Surgeons of Edinburgh. Onsite and internet searches were also made at the British Library, the Wellcome Museum, and the National Army Archives in London.

The increasing female authorship of British literature in the eighteenth and early nineteenth century began to provide women's narratives on ill health and medical treatment. Although famous women writers such as Mary Astell (1666-1731), Lady Elizabeth Hastings (1682-1739) and Lady Mary Wortley Montagu (1689-1762), suffered and died from breast cancer, and Astell and Hastings had surgery, few details exist of their treatment or personal experiences. The first literary works to illustrate the challenges faced by women with breast problems were in the novels *Memoirs of Miss Sidney Bidulp* (1761) by the Irish writer Francis Sheridan (1724-1766), and in *Belinda* (1801) by the Anglo-Irish writer Maria Edgeworth (1768-1849).[6] *Belinda* has been described by the English literature scholar Kathryan

[4] Porter, Porter, *Patient's Progress,* pp.76-78.
[5] Percival, *Medical Ethics*, p.43.
[6] F. Sheridan, *Memoirs of Miss Sidney Bidulp, Extracted from her Own Journal*, R. & J. Dodsley, London, G. Faulkner, Dublin, 1761, http://www.gutenberg.org/files/43437/43437-h/43437-h.htm, accessed December

Kirkpatrick as a conduct book written particularly for women writers and regarded as one of the great classics in English literature.[7] In *Memoirs of Miss Sydney Bidulp*, the story of a woman with a breast tumour is incorporated into the plot as a separate additional story, whereas in *Belinda,* the central character of the novel is Lady Delacor and the story of her breast disease is described in great detail. I will therefore use the fictitious account in Belinda to gain a greater understanding of the contemporary attitudes towards ill health, surgeons and surgery.

My search of contemporary textbooks of surgery failed to find any accounts by surgeons which described the encounters between themselves and their patients. The details provide were limited to descriptions of the patient's symptoms, the physical findings and management. This was similar to the findings of Dorothy and Roy Porter. Very occasionally, remarks were made by the surgeon that surgery 'was borne with great fortitude' by the patient.[8] A search of the five volumes of case histories of John Hunter's patients, revealed brief information about their complaints and his views, but minimal personal data and nothing about their individual experience of surgery.[9] One account by Henry Fearon (1750-1825) who was a surgeon in Surrey and a Member of the Company of Surgeons of London, provided his perspective on the anxieties and fears faced by women offered surgical treatment for breast cancer. In his 1784 monograph Fearon wrote that:

> although the operation may be the only alternative to which the patients must have recourse in order to preserve life, yet it requires a greater degree of resolution than most of them can summon up to submit to it. The certainty of very severe and acute pain during the operation, as well as that which must naturally follow, the fear of great effusion of blood, the uncertainty of success, the long confinement, and in many cases, mutilation and deformity, are difficulties of considerable magnitude, and not easily surmounted.[10]

While the stories I am about to discuss of the three women and three men who underwent major surgery between 1811 and 1842, are well known to historians and have

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2020 and January 2021; M. Edgeworth, *Belinda*, 3 vols, J. Johnson, London, 1801. I used the 1802 version edited by Kathryn Kirkpatrick and published by Oxford University Press, New York, 1994.

[7] Edgeworth, *Belinda*, p.xiii.

[8] A. Cooper, *Illustrations of the Diseases of the Breast*, Part 1, Longman, Rees, Orme, Brown, & Green, London, 1829, p.34, http://archives.org>details, accessed in 2018, Royal College of Surgeons of England Library & Archives, MS0008/2/1/9, Case 8, Viewed 21 May 2018.

[9] *The Case Books of John Hunter*, E. Allen, J. Turk, & R. Murley, eds., Royal Society of Medicine Services Limited, London,1993, p.651.

[10] H. Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* J. Johnson, London, 1784, pp. vi-vii, http://archive.org>details, b30792903-0001, accessed 2016-2020.

been the subject of much scholarship, their experiences are critical to my study and will be re-examined in depth, taking into account the specific focus of this thesis. Five were British patients and one was an American. One of the British patients who was residing temporarily in France had her surgery performed in Paris and followed a similar pattern to what would have occurred had this occurred in Britain. The American patient is included because her management provides a helpful insight into the challenges of consultations by post. The narrative account on one patient named by the pseudonym 'Ailie Noble', is based on a short story written by the Scottish physician and writer John Brown (1810-1882). Although there is evidence to show this story was based on a real patient, I am mindful that it was written in the genre of short stories and not directly from the patient.

The only surviving correspondence between patients and their surgeons which I could find was in the archives held by the Royal College of Surgeons of England in London. Collections of written material connected to past surgeons are held by this College and temporary stored in the London Metropolitan Archives during the current rebuilding of the College. Those relating to the London surgeon Sir Astley Cooper (1768-1841) contain diverse papers and are held in twenty-two separate box-folders. A search of each folder revealed a total of sixty letters written by patients or their families to this surgeon between the years 1812 and 1840.[11] These letters which have not been digitised originated from diverse locations in Great Britain, Ireland, Canada, and Trinidad. I photographed each letter for subsequent analysis and found it possible to read most of the content of fifty-six letters although some parts could not be made out due to illegible writing, fading or damage. The remaining four letters were indecipherable. Thirty-three letters were written by patients, eight were from patients' husbands, two from family or friends and the remaining thirteen were written on behalf of patients by their local surgeon-apothecary.

The information gathered about the six patients who had surgery, and from each letter, was analysed to elucidate the nature of the surgeon-patient encounter. To contextualize these meetings, my analysis included the demography of the patients, their medical histories, the reasons for their consultations and surgery, their expectations from these encounters and what ultimately transpired. Further questions explored what the illness meant to these patients and their families, as well as their anxieties, fears, and emotions. The treatment given, its side effects, and how these patients coped with the physical and emotional challenges they faced were investigated. A review was also made of the behaviour of the surgeons to establish if this reflected the attributes of professionalism, and if the standards of care were in keeping with those expected from an educated and

[11] Royal College of Surgeons of England, Library & Archives, MSOO8, 2.2.1. – 2.2.12.

scientifically aware profession. A search was also made for the overall common themes, important messages, and possible areas of silence in these accounts. The experiences of those who consulted surgeons and those who went on to have surgery provided two different but complementary sets of information for analysis.

Case studies of the stories of six surgical patients

Fanny Burney d'Arblay (1752-1840) was born in Kings Lynn and later became a highly respected and best-selling novelist and diarist. She was Keeper of the Robes to Queen Charlotte in the Court of George III. Her first novel *Evelina* was published to great acclaim in 1778 and was followed by *Cecilia* (1782), *Camilla* (1796) and *The Wanderer* in 1814. These novels have been regarded as a form of conduct books although Burney regarded them as more about morality. In referring to women who won for themselves a place in the national memory by their intellectual achievements in the eighteenth century, the historian Doris Stenton (Lady Doris), included Fanny Burney in her 'list of remarkable women' … 'who in different ways illustrate this release of the female intellect.'[12]

In August 1810 when she was 59 years old, Burney became aware of a pain in her right breast. In a hand-written letter to her sister Esther, she recounted her personal experience from the onset of her symptoms, through diagnosis, conservative treatment and eventually surgery, the latter taking place at her home in Paris on 30 September 1811. This letter is unique in the level of detail and insight it provided, and I have deemed it worthy of comprehensive representation as well as the findings from analyses by previous researchers.[13]

After her initial treatment proved to be ineffectual, Burney was pressed by her husband, friends, and family doctor to see a surgeon. Initially she was 'revolted from the idea' and hoped that care and warmth would make this unnecessary. Some months later they pressed her again to consent to an examination, but wrote:

[12] D. Stenton, *The English Woman in History,* George Allen & Unwin, London, 1957, p.296.
[13] Fanny d'Arblay Burney, *Letter to her Sister Ester Burney, dated March 22, 1812*, The Henry W. and Albert A. Berg Collection of English and American Literature, Room 320, The New York Public Library, Fifth Ave, and 42nd Street, New York; J. Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay*), ed., vol 6, 1975, pp.596-616; J. Epstein, 'Writing the Unspeakable: Fanny Burney's Mastectomy and the Fictive Body', *Representations*, 16, (1986), pp. 131-166. http://jstor.org.ezproxy.auckland.ac.nz/stable/2928516?&Search. Accessed between 2012 and 2020; J. Olson, *Bathsheba's Breast: Women, Cancer & History*, The Johns Hopkins University Press, Baltimore & London, 2002, pp.51-53.

> I thought their fears groundless and could not make so great a conquest over my repugnance. I relate this false confidence, now, as a warning to my dear sister Ester – my Sisters & Nieces, should any similar sensations excite similar alarm.[14]

She 'most painfully & reluctantly' ceased to object and agreed to see Dr Antoine Dubois, the leading surgeon-obstetrician in France, and obstetrician to both of Napoleon's wives, and Dr Dominique-Jean Larrey, the legendary army surgeon and Surgeon-in-Chief to Napoleon's Imperial armies.[15] Both were raised to the Barony by Napoleon.

Despite the various medical treatments prescribed, Burney's symptoms increased, and they advised her to have an operation. Although she had earlier felt that her horror of an operation was insuperable, she now agreed it was necessary and gave her consent. She obtained a promise of four hours of warning to help her prepare for the ordeal. She enquired about the severity of the pain associated with surgery and how she could make it 'less dreadful.' She was told by one of the doctor's present - Dr Ribe - to cry and that to withhold or restrain herself might have seriously bad consequences. Dr Ribe enquired if she had cried or screamed during the birth of her son Alexander and when she replied that 'it had not been possible to do otherwise; oh then, he answered, there is no fear.'[16]

The surgeons did not inform her or her husband what exactly the surgery would entail or when it would take place. Sensing her increasing anxiety during the subsequent delay, Burney's husband wrote to the surgeons requesting they proceed without further postponement. Following an anxious three weeks, she received a letter from Larrey informing her that her operation would take place at her residence at 10 am that morning, and that the surgeons had agreed between themselves to give her just two hours' notice. She replied that she would not be ready until the afternoon. A few weeks later, Burney discovered the delay in her surgery was caused by Dr M. Dubois's concerns that the cancer was too far advanced for any remedy and that surgery would accelerate her death. However, they agreed to proceed because she had earlier told Larrey that:

> I would far rather suffer a quick end … than a lingering life with this dreadfullest of maladies: he finally, therefore, considered it might be possible to save me by the trial, but that without it my case was desperate, & resolved to make the attempt.[17]

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[14] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* pp.598-599.
[15] J. Dible, 'D.J. Larrey, A Surgeon of the Revolution, Consulate, and Empire', *Medical History,* 3, 2 (1959), pp. 100-107.
[16] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.604.
[17] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.607.

Burney had a light breakfast and after arranging for her husband to be called away - which was her wish and that of her surgeons - she made her will, wrote some letters, and prepared herself for the operation. As she waited, the sight of numerous bandages, compresses and sponges made her sick with emotion. She was given a wine cordial and went to the appointed room for her surgery, which 'without previous message was entered by 7 Men in black … I was now awakened from my stupor - & by a sort of indignation - Why so many? & without leave? - But I could not utter a syllable.'[18]

Larrey had promised her that she would be sitting in an armchair during the operation as was then the usual practice. She was therefore astonished and began to tremble on overhearing Dr Dubois, demand two old mattresses.

> I stood suspended, for a moment, whether I should not abruptly escape – I looked at the door, the windows – I felt desperate, … I called for to my maid – she was crying, & the two Nurses stood, transfixed, at the door. Let those women go! cried M. Dubois … no I cried, let them stay! … the maid, however, and one of the nurses ran off – I charged the other to approach & she obeyed.[19]

Burney described how M. Dubois issued his commands in military style,

> but I resisted all that were resistible – I was compelled, however, to submit to taking off my long robe de Chambre, which I had meant to retain – Ah then, how did I think of My Sisters! – not one, at so dreadful an instant, at hand, to protect – adjust – guard me.[20]

Recognising her distress, Dubois 'now softened, & spoke soothingly. Can You, I cried, feel for an operation that, to You, must seem so trivial? – Trivial? He repeated – taking up a bit of paper, which he tore, unconsciously, into a million of pieces.'[21] She noticed Dubois had again grown agitated whereas Dr Larrey remained aloof, although she observed that he looked as pale as ashes. She described how Dubois placed her on the mattress and spread a transparent cambric handkerchief upon her face. She saw, through it, that the bedstead was instantly surrounded by the seven men and her nurse. Burney wrote, 'I refused to be held, but when, Bright through the cambric, I saw the glitter of polished steel – I closed my Eyes.'[22]

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[18] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.610.
[19] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.610.
[20] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.610.
[21] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.611.
[22] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.611.

In the silence that followed, her anxiety became more acute when she discovered as the surgeons drew incision lines on her right breast that they were about to remove it completely. She raised herself up and pointed out the disease was only in one area. Despite her resistance and wish that only part of her breast be removed, she was:

> heard attentively, but in utter silence, & Dubois then re-placed me as before, … how vain, alas my representation! … Hopeless, then desperate, & self-given up, I closed once more my eyes, relinquishing all watching, all resistance, all interference, & sadly resolute to be wholly resigned.[23]

She described the terrible silence that pervaded the room and that once:

> the dreadful steel was plunged into the breast – cutting through veins – arteries – flesh – nerves - I needed no injunctions not to restrain my cries. I began a scream that lasted unintermittently during the whole time of the incision.[24]

Burney also provided graphic details of how her eyes were as if hermetically shut as she felt the knife scraped atom after atom of breast tissue off the breastbone. The operation and application of the dressings lasted twenty minutes:

> a time, for suffering so acute. That was hardly supportable – however, I bore with all the courage I could exert, & never moved, not stopt them, nor resisted, nor remonstrated, nor spoke – except once or twice, during the dressings.[25]

Exhausted from the ordeal, she was carried to her bedroom. Burney eventually recovered from her surgery and lived another twenty-nine years. According to historian Julia Epstein, some modern physicians have questioned the validity of Burney's diagnosis of cancer on the basis of her long survival.[26] However, the behaviour of the breast problem prior to surgery, and the description of the appearance of the tumour by Larrey's pupil, was in keeping with cancer and the diagnosis made by Burney's leading French surgeons.[27] Furthermore, the radical removal of her breast, part of the underlying muscle, and lymph nodes in the adjoining axilla followed the accepted surgical treatment of breast cancer first advocated by the French surgeon Jean-Louis Petit (1674-1750).

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[23] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* pp.611-612.
[24] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.612.
[25] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.613.
[26] Epstein, 'Writing the Unspeakable', p.142.
[27] J. Collins, 'Mastectomy with Tears: Breast Cancer Surgery in the Early Nineteenth Century', *Australian and New Zealand Journal of Surgery,* 86 (2016), pp.720-724.

Burney's letter provides a historical account of the journey a woman with a breast tumour might experience as they went through consultation, diagnosis, surgery, or internal and external treatment, prior to the advent of anaesthesia. Julia Epstein noted in 1992 that Burney's letter 'tells a story of women's courage in the face of pain, as numerous war stories have recounted male courage.'[28] Epstein also noted that while the extent of detail Burney included in her letter makes it a significant document in the history of surgical technique, its 'intimate confessions and elaborately fictive staging, persona-building, and framing make it likewise a powerful and courageous work of literature.'[29] In narrating the story of her surgery, Burney used the reflective techniques she had mastered when writing her successful novels. She was also familiar from her previous writing with the depiction of physical and mental pain and forced loss of control, especially by women.[30] Susan Liepert in her PhD thesis, wrote that Burney's narrative could be explained as an attempt to communicate her lived experience through text, or how it actually felt.[31]

There is no doubt that Burney was put off by the thought of having an examination of her breasts as she described being 'repugnant' and 'revolted from the idea,' although there may also have been an element of her not considering her condition serious enough to warrant an embarrassing examination. In terms of the surgeon-patient relationship, Burney's letter depicts aspects of the power of professional authority versus patient autonomy, accentuated perhaps by the dynamic of a male-female encounter. In an attempt to retain some control over her surgical event, she sought to ensure that her two maids and nurse remained with her throughout the procedure, got on the bed "unbidden", and refused to be bound and blindfolded as was then the frequent practice.[32]

Once she became aware that the surgeons were about to remove her entire right breast, it 'aroused me from my passively submissive state', and she challenged them as to why this was necessary but was met with absolute silence.[33] She confronted Dubois about his failure to understand the traumatic effect an operation like this was having on her and implied this it was because it seemed so trivial and routine to him. Instead of responding with compassion and empathy, he became agitated. Larrey meanwhile remained perfectly calm and aloof from the tension which had arisen between Burney and Dubois. It was then normal practice that

[28] Epstein, 'Writing the Unspeakable', p.164.
[29] Epstein, 'Writing the Unspeakable', p.131.
[30] Epstein, 'Writing the Unspeakable', pp.131-132.
[31] S. Lierert, Breasted Experience Late-18th- Century Women's Writing and Medical Discourse, PhD Thesis, University of Alberta, Abstract, 2007.
[32] B. Bell, *A System of Surgery,* Bell & Bradfute, Edinburgh, 1796, Vol 5, p.177. https://archive.org/details/asystemsurgery04bellgoog. Accessed 11. 04. 2018.
[33] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.611.

once the patient passed through the door of the operating theatre, consent for surgery was assumed and there was no turning back for the patient.[34]

Burney experienced different behaviours from her two surgeons. She portrayed Dubois as a dominant and aggressive person, prone to anger and overconfident of his opinion and without compassion. Larrey was depicted as an excellent, worthy, and modest man, full of scruples and endowed with real genius in his profession, and one who showed his sympathetic feelings and offered her friendship and support.

An interesting irony is that despite the pain Burney suffered at the hands of her surgeons, she felt compassion for them having to perform such surgery and desired to lessen their distress. At the completion of her operation, she said, 'Ah gentlemen! I pity you! - for indeed I was sensible to the feeling concern with which they all saw what I endured though my speech was principally - very principally meant for Dr Larrey.'[35] As pointed out by Epstein, Burney found the energy to worry about Larrey despite being exhausted herself.[36] At the completion of her operation, she described him as 'my good friend Dr Larrey, pale nearly as myself, his face streaked with blood, & its expression depicting grief, apprehension, & almost horror.'[37]

The failure of the surgeons to inform Burney of the extent and date of her operation, might be regarded as a manifestation of the power of professional authority but it was more likely their wish to reduce her anxiety while she waited for her operation. Referring to her earlier wait for consultation, she wrote, 'I was informed of it on the same day to avoid useless agitation.'[38] Although she consented to an operation for her breast lump, there is no suggestion in her letter that she sought further details from the surgeons on the procedure they planned to carry out. Mastectomy was then the accepted treatment for large breast tumours and consent would usually have involved obtaining the patient's agreement to 'an operation'.

She described her operation as a time of suffering so acute that it was hardly bearable, yet apart from screaming, she did not speak, remonstrate, or resist. Even more astounding was the fact that although she was neither bound or blindfolded, she never moved or sought at any time to stop the surgeons operating. One wonders whether her stoicism and ability to remain perfectly still and in 'speechless agony' was a skill learned

[34] C. Massey Dawkins, 'The First Public Operation Carried out Under an Anaesthetic in Europe', *Anaesthesia*, 1, (1947), pp.51-61, https://doi.org/10.1111/j.1365-2044.1947.tb02067.x, accessed 2018-2020.
[35] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.614.
[36] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.614.
[37] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.614.
[38] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay),* p.610.

during her time as Keeper of the Robes for Queen Charlotte between 1786 and 1791. In a letter to her family during that time, Burney described the court etiquette of having to keep perfectly still and silent - no coughing, sneezing or movement - before the King and Queen.[39]

Julia Epstein gave three reasons why Burney wrote her letter and asked for it to be circulated widely. These included her desire to ensure that those who cared about her received the correct information about her surgery; to document and prove her recovery; and to divest her traumatic experience of some of its power of intimacy.[40] I suggest there may have been some other reasons. Burney was already a celebrated author, and it is likely that through her own and her family's interest in education, she wished to influence the behaviour of surgeons to initiate an improvement in health care and its delivery for other patients. Based on my own experience of using Fanny Burney's letter as an educational resource for medical students and surgical residents, it continues to have a profound influence on those who read it, one hundred and eighty years after her death. Of Fanny Burney it may truly be said:

> Imaginative writers are valuable colleagues, … in the knowledge of the human heart they are far ahead of us common folk because they draw on resources that we have not yet made accessible to science.[41]

The second patient and an example of consultation by post was Abigail Adams Smith. Born in Quincy, Massachusetts in 1765, and the daughter of John Adams, a founding father of the United States and its second President, and Abigail Adams who was an important woman in American social history. Abigail, who was a well-educated woman for that period, married a member of her father's staff and with whom she had four children, three of whom reached adult life.[42] There is a paucity of accessible primary information about Abigail's surgical experience, and I have therefore relied predominantly on the findings by the historian Edith Gelles whose comprehensive article includes vital information based on the primary sources she managed to access.

In July 1811, Abigail who was then aged 45 years, travelled three hundred miles from her upstate New York home to Boston to consult with the surgeon Dr Warren (1753-1815) and his colleagues about a lump in her breast, and was offered varying opinions as to its

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[39] *The Diary and Letters of Madame d'Arbly*, ed., Charlotte Barrett, 4 vols, London, 1891, vol 2, pp.54-55.
[40] Epstein, *Writing the* Unspeakable', pp.131-166.
[41] S. Freud, *Delusions and Dream in Wilhem Jensen's Gradiva*, translated by Helen. Downey, Moffat, Yard & Co, New York, 1919, www.Bartley.com/287 Accessed 16 December, 2010.
[42] E. Gelles, *Portia: The World of Abigail Adams, Ch. 9, My Closest Companion,* Indiana University Press, Bloomington, 1992, pp, 150-172, & References pp. 207-211, https://hde-handle-net.ezproxy.auckland.au.nz, Accessed 2016-2020. I am indebted to Edith B Gelles for the details, personal letters and references she has included in her biography of Abigail Adams, mother of Abigail Adams Smith.

nature. In September 1811, Abigail wrote a letter to the well-known American physician and family friend Dr Benjamin Rush (1746-1813). In her letter Abigail began with some self-restraint by writing, 'you will I hope pardon the Liberty I have taken to address myself to you Sir upon a matter which has become very interesting to myself.' She described how in May 1810:

> I first perceived a hardness in my right breast above the nipple which occasioned me an uneasy sensation - like a burning sometimes an itching ... but without any dis-colouration at all. It has continued to contract and the Breast has become much smaller than it was - the tumour appears now about the size of a (Cap) and does not appear to adhere but to be loose. I applied to a Physician and he recommended me to apply a Plaister of the circuta … [and have] taken a considerable of the circuta in Pills … [which she stopped as it caused] a heaviness in my head'. [The tumour is] 'becoming harder and a little redness at times on the skin.'[43]

She explained that Dr Warren had seen it and told her that:

> in its present state he would not advise me to do anything for it, … [if it] should enflame he would recommend surgery … this is a remedy that I don't know in any Event I could consent to submit to … certainly I should wish to try every other positive expedient first.[44]

Dr Rush responded to Abigail's letter by replying not to her but to her parents. In his letter which has been cited by historian James Olsen, Rush stated, 'I prefer giving my opinion & advice in her case this way. You and Mrs Adams may communicate it gradually and in such a manner as will be least apt to distress and alarm her.'[45] Rush explained that from on his fifty years of experience in treating similar cases, he found that in nineteen out of twenty patients, all local applications and internal medicines do harm or suspend the disease until it passes beyond that time in which the only remedy is ineffectual. He wrote:

> this remedy is the knife. From her account of the moving state of the tumour, it is now in a proper situation for the operation. Should she wait till it suppurates or even inflames much, it may be too late … I repeat again, let there be no delay in flying to the knife. Her time of life calls for expedition in this business. … It shocks me to think of the consequences of procrastination.[46]

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[43] Gelles, *Portia*, pp.161-2.
[44] Gelles, *Portia*, p.162.
[45] J. Olson, *Bathsheba's Breast*, p.40; *Letters of Benjamin Rush,* L. H. Butterfield, ed., Princeton University Press, Princetown, 1951, 2, p.1104.
[46] Olson, *Bathsheba's* Breast, p.40; Letters of Benjamin Rush, p.1104.

Rush assured them that the pain of the operation was less than Abigail feared, based on his own personal experience of the removal of a tumor in his neck. The operation took place at her parents' home in October 1811, but no details of the procedure exist. Edith Gelles has cited Abigail's mother's correspondence to her son John in which she confirmed that Abigail had undergone a mastectomy. She wrote:

> there has been an operation on your sister … [the doctors] had pronounced a tumor … there was no chance for her Life but by immediate operation … she is doing as well as could be expected after an operation in which the whole breast was taken off ... every affected part was removed ... we have every prospect of her perfect recovery to health and usefulness again.[47]

Circumstances suggest the operation was performed by the family friend John Warren the founder of the Harvard Medical School, assisted by his son John Collins Warren (1778-1856) who later followed his father as professor of anatomy and surgery at Harvard and became its first medical dean. Abigail made a slow recovery and eventually returned to her home. She was well for a short time but then developed pains which were initially diagnosed as rheumatism. It soon became clear that it was not rheumatism but the return of cancer which was the cause of her pains. She made the long and arduous journey back to her parent's home where she died in August 1813.[48]

In terms of the relationship between Abigail and her surgeons, there is little primary material to go by. She was prepared to have a physical examination by more than one clinician in Boston. It may have been the diagnostic confusion which emanated from these examinations that led her to write directly to Rush. This was somewhat out of character for a person who was described as a being shy and reserved. Gelles noted that Abigail had read Rush's treatise on cancer and was sufficiently impressed by this to write directly to him.[49]

The decision by Rush to write to Abigail's parents rather than responding directly to her may appear on first sight to contravene normal ethical principles or even reflect a degree of paternalism. On the contrary, Rush's letter demonstrates quite clearly his empathy and compassion for Abigail by explaining to her parents how they could break the news more gradually and offer her immediate support.

Abigail was keen to avoid surgery and tried various other forms of treatment in the hope of doing so. Rush, who knew as much about cancer as anybody else at that time, was dismissive of the conservative treatments being offered to patients with breast cancer. He

[47] Gelles, Portia, p.163.
[48] Gelles, Portia, p.167.
[49] Gelles, Portia, p.161

labelled them as harmful and was concerned that their use could result in delaying surgery until it was too late to be feasible. This is similar to the comments made by Henry Fearon in 1784 when he wrote these treatments:

> with caustic or escharotics, … protract the disease often torturing the patient, … till matters become so desperate, that little or no hope can be entertained even from the operation, which, had it been performed in time, might have proved effectual.[50]

Although there is no record of how Abigail perceived the pain which accompanied her surgery, it would seem likely that she saw it as the price she was prepared to pay in the hope of achieving relief from her cancer. Even though religious considerations were not mentioned, her stoicism was most likely influenced by her own and her family's strong puritan religious beliefs.

The third female 'patient' was known by the name of Ailie Noble. This was the pseudonym given in a short story by the Scottish physician and writer Dr John Brown to a sixty-year-old woman whom he described as having surgery for breast cancer at Minto Hospital in Edinburgh in 1830.[51] Although the story was written by Brown almost thirty years after the event, the year and truth of the story was confirmed by Alexander Peddie who was a fellow student at Minto Hospital at that time. Peddie also quoted Brown as saying that the story 'is in all essentials strictly matter of fact.'[52] Brown was then acting as a medical clerk for the Scottish surgeon James Syme. He had come to know this woman and her husband James through his familiarity and admiration for their dog Rab.

In October 1830 James arrived at the gate of Minto hospital with his horse and cart and accompanied by his dog Rab. Sitting on a bag of straw in the cart wrapped up in her husband's coat was his wife Ailie. James announced to Brown, 'Mister John, this is the mistress; she's got a trouble in her breest, some kind o' an income we're thinkin.'[53] Brown remarked:

> he never saw a more unforgettable face – pale, serious, lonely, delicate, sweet … her silvery smooth hair setting off her dark-grey eyes – eyes such as one sees only twice or thrice in a lifetime, full of suffering, but full also of the overcoming of it ... I never saw a more beautiful countenance, or one more subdued to settle quiet.[54]

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[50] Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* 1784, pp. i-ii.
[51] J. Brown, *Rab and His Friends; & Other Papers & Essays*, J. M. Dent & Co, London, 1907.
[52] A. Peddie, 'Dr John Brown: His Life and Work; with Narrative Sketches of James Syme in the Old Minto House Hospital and Dispensary Days etc', *Edinburgh Medical Journal*, 35, 11 (1890), p.1057.
[53] Brown, *Rab and His Friends*, p.37.
[54] Brown, *Rab and His* Friends, p.38.

All four went to a consulting-room where Ailie sat down, undid her gown and neck handkerchief and without a word showed Brown her right breast. He described his findings on examination in the following words which are more in keeping with those of a writer rather than those of a medical professional:

> I looked at it and examined it carefully … what could I say? There it was, that had once been so soft, so shapely, so white so gracious and bountiful, so full of all blessed conditions, hard as a stone, a centre of horrid pain, making that pale face, with its grey, lucid, reasonable eyes, and its sweet resolved mouth, express the full measure of suffering overcome.[55]

Ailie was admitted to hospital and the next day was examined by the well-known Scottish surgeon Mr Syme. Brown wrote that Syme said:

> there was no doubt it must kill her, and soon. It could be removed – it might never return – it would give her speedy relief – she should have it done. She curtsied, looked at James, and said, "When?" "Tomorrow," said the kind surgeon, a man of few words.[56]

Brown described how the following day Ailie accompanied by her husband and their dog arrived in the operating theatre which was crowded with medical students and where the surgeon and his staff of assistants were waiting for her. James and the dog sat down in the distance while Ailie:

> walks in quickly, but without haste … steps up on a seat, and laid herself on the table, as her friend the surgeon told her; arranged herself, gave a rapid look at James, shut her eyes, rested herself on me, and took my hand. The operation was at once begun; it was necessarily slow; and chloroform – one of God's best gifts to his suffering children – was then unknown. The surgeon did his work. The pale face showed its pain but was still and silent … blood flowing … and she suffering.[57]

After the surgery was over, she was dressed, stepped down from the table, curtseyed to the surgeon and the students, and begged their pardon if she had behaved ill, and returned to her bed on the ward. Her wound was subsequently regularly dressed by Syme who 'spoke to her in his own short kind of way, pitying her through his eyes.'[58] All seemed to be progressing well until the fourth day after her operation when she started to shiver, lapsed

[55] Brown, *Rab and His* Friends, p.39.
[56] Brown, *Rab and His* Friends; p.40.
[57] Brown, *Rab and His* Friends, p.42.
[58] Brown, *Rab and His* Friends, pp.42-43.

into delirium from an infection in her wound infection and died.[59] Infection or hospital disease as it was then called was a dreaded complication of surgery and frequently fatal.

The description of her breast cancer suggests it was far advanced when she first sought advice. Her initial reticence to consult a surgeon may have been due to modesty, fear of surgery and its possible complications or even denial. Because she and her husband were previously acquainted with Brown who was the surgeon's clerk, this may have given them confidence and helped her to submit to a painful operation as the only option for relief and possibly cure. Brown observed her face as showing her pain and suffering during the operation, yet he described how she remained still and silent during what was in fact a public spectacle in an operating theatre crowded with medical students. Brown did not state whether she was bound and blindfolded during her surgery, but it appears unlikely. Because this was written as a short story, it is not possible to draw much from it about the surgeon-patient relationship or the attitude of the surgeon. Brown referred to him as a kind surgeon and a man of few words, and that when he dressed Ailie Noble's wound, he showed compassion. Brown's apprenticeship fee had enabled Syme to purchase his first carriage and he was the first person to be invited to ride in it. He became his dresser, clerk and assistant and had a life-long friendship with him.[60] It is therefore to be expected that he would laud Syme with a writer's positive words. Epstein has stated that Syme 'is celebrated for maintaining, even to excess, feminine decorum and modesty despite the horrors of the knife.'[61]

The fourth patient is George Wilson (1818-1859) who was a medically qualified Scottish chemist, Regius Professor of Technology at the University of Edinburgh, and a Fellow of the Royal Society of Edinburgh. He underwent an amputation of his foot in 1842, prior to the advent of anaesthesia and during the period in which he was a lecturer in chemistry at the Royal College of Surgeons of Edinburgh. Wilson wrote to Sir James Simpson (1811-1870), the discoverer of chloroform, in response to the comments which were being made by some surgeons in their opposition to the use of anaesthesia during surgery. He wished to repudiate the declarations some surgeons had made about anaesthesia and wrote:

> I have recently read with mingled sadness and surprise the declarations of some surgeons that anaesthetics are needless luxuries, and that unendurable agony is the

[59] Brown, *Rab and His* Friends; p.42.
[60] M. Eastwood, 'John Brown (1810-1882)', *Journal of the Royal College of Physicians of Edinburgh*, 40, (2010), pp. 281-282.
[61] J. Epstein, *The Iron Pen*, Bristol Classical Press, Bristol, 1989, p.77.

> best of tonics. Those surgeons, I think, can scarcely have been patients of their brother surgeons, and jest at scars only because they never felt a wound; but if they remain enemies of anaesthetics after what you have written, I despair of convincing them of their utility.[62]

In the words Wilson used from Shakespeare's Romeo and Juliet, Romeo who was in love, implied that Mercutio who had never had this feeling, 'jests at scars that never felt a wound.'[63] Wilson used this metaphor to illustrate how surgeons who had not personally experienced the pain of surgery were against the use of anaesthesia, and that 'only those who suffered without their help are in a condition to urge.'[64] In writing from his own experience, Wilson described the failure of medical treatment to resolve the excruciatingly painful disease of his foot which had been caused by an injury. As a result, he was informed by two surgeons that he must choose between death and the sacrifice of a limb, and that his choice must be made promptly, for his strength was fast sinking under pain, sleeplessness, and exhaustion. Wilson at once:

> agreed to submit to the operation but asked for a week to prepare for it … because it was so probable that the operation would be followed by a fatal issue, that I wished to prepare for death and what lies beyond.[65]

On the morning of his surgery, Wilson had twelve cups of tea and a fragment of toast for breakfast. As a qualified medical practitioner and chemist, he must have had little confidence in the available medications to reduce pain, for he wrote, 'I took no preparative stimulant or anodyne of any kind.'[66] He described how his surgery was more tedious than some others which involve much greater mutilation because:

> it necessitated cruel cutting through inflamed and morbidly sensitive parts and could not be dispatched by a few swift strokes of the knife, … of the agony of it occasioned, I will say nothing. Suffering so great as I underwent cannot be expressed in words, and thus fortunately cannot be recalled. The particular pangs are now forgotten; but the blank whirlwind of emotion, the horror of great darkness, and the sense of

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[62] G. Wilson, 'Anaesthetics in Surgery, from a Patient's point of View', in J. Duns, ed., *Memoir of Sir James Y Simpson,* Bart, Edmonton & Douglas, Edinburgh, 1873, p. 262-269, https://books.google.ne>books, Accessed 2018-2020.
[63] W. Shakespeare, 'Romeo and Juliet, Act 2, Scene 2', in *The Complete Works of Shakespeare Comprising his Plays and Poems,* Spring Books, London, 1958. p.901.
[64] Wilson, 'Anaesthetics in Surgery', p.263.
[65] Wilson, 'Anaesthetics in Surgery', p.263.
[66] Wilson, 'Anaesthetics in Surgery', p.263.

> desertion by God and man, bordering close on despair, which swept through my mind and overwhelmed my heart, I can never forget, however gladly I would do so.[67]

Wilson went on to confess the anguish and humiliation of such a personal experience, and his difficulties in finding suitable language to describe it. He observed that unlike him, some were gifted with physical courage and able to endure severe injuries without flinching. He said he belonged to that:

> large class, including most women, to whom cutting, bruising, burning, or any similar physical injury is a source of suffering never willingly endured, and always anticipated with more or less of apprehension. Pain in itself has nothing tonic or bracing in its effects on such. In its relation to the body, it is a sheer and unmitigated evil.[68]

He described how having made up his mind to have the operation, he thought the pain would far exceed his tolerance, and prepared himself for it as for 'a dreadful necessity from which there was no escape.'[69] Having to conceal the horror of his impending surgery from his relatives in case they tried to change his mind, added to his emotional burden.

Wilson recounted that 'during the operation, in spite of the pain it occasioned, my senses were preternaturally acute as I have been told they generally are in patients in such circumstances.'[70] He described how he watched his surgeon operate with a fascinated intensity, including:

> the spreading out of the instruments; the twisting of the tourniquet; the first incision; the fingering of the sawed bone; the sponge pressed on the flap; the tying of the blood-vessels; the stitching of the skin; and the bloody dismembered limb lying on the floor.[71]

It is possible that through observing and later describing these events and seeing the 'dismembered limb lying on the floor', he was acknowledging that this limb would trouble him no more. In 1986, Julia Epstein cited a similar experience and attributed the same words to an American patient who underwent an amputation in eighteenth-century Massachusetts.[72]

Wilson was aware of the pain and risks involved in surgery and took time to consider these before his operation including 'to prepare for death and what lies beyond'. This

[67] Wilson, 'Anaesthetics in Surgery', pp.263-264.
[68] Wilson, 'Anaesthetics in Surgery', p.265.
[69] Wilson, 'Anaesthetics in Surgery', p.265.
[70] Wilson, 'Anaesthetics in Surgery', p.266.
[71] Wilson, 'Anaesthetics in Surgery', p.266.
[72] Epstein, 'Writing the Unspeakable', p.147.

reference to the afterlife, his 'sense of desertion by God', and his thanking of God for the later discovery of anaesthesia reflect his religious beliefs. However, it does not appear that he perceived his pain as having a divine purpose for he wrote, 'I prepared for it, simply as for a dreadful necessity from which there was no escape.'[73] In other words, he perceived the pain as a temporary experience which he must endure to survive and become free of the excruciating pain in his foot.

Wilson was in a unique position to comment on the behaviour of contemporary surgeons and on the surgeon-patient relationship. He had observed surgeons interacting with patients and performing operations while he was a medical student. Later while a lecturer at the Royal College of Surgeons of Edinburgh, it is likely that he would have interacted with surgeons on a regular basis. His exposure to surgeons during his education, early employment, and the management of his painful foot, enabled him to comment on whether surgeons demonstrated the attributes of professionalism such as sympathy and compassion. Although he did not mention the behaviour of his own surgeons, this must have influenced him in making his claim that only those who had personally experienced the pain and suffering of surgery could understand it fully. This was made even stronger by his observation that even the most humane and thoughtful surgeons had no concept of what patients had to endure during an operation. There was a tone of desperation in his letter as he recounts these experiences and his despair about the difficulties in convincing surgeons of the utility of anaesthesia.

Joseph Townend (1806-1888) was a United Methodist Church Minister, who as a three-year-old boy living in Linton, West Yorkshire, suffered severe burns to his right arm and armpit when his apron caught fire in the neighbour's kitchen fire. In his autobiography, Townend described how the local doctor advised his mother that 'I should be allowed quietly to die', to which she replied, "my child will get better; if you will not dress his wounds I will!"[74] The doctor cut away the damaged flesh and left his future care in the hands of his mother. In time the skin healed over, but in doing so his right arm became fixed to his chest wall. At the age of seven he was sent to work in the local cotton factory and despite his disability, he worked between thirteen and fourteen hours a day. Some years later he injured his right wrist and when the doctor was setting the fracture, Joseph asked him about his right arm. The doctor replied that 'he could relieve the case, but it would cost 100 guineas and I went home weeping, very much dejected.'[75] While walking in a nearby lane in 1824, Joseph, by

[73] Wilson, 'Anaesthetics in Surgery', p.265.
[74] J. Townend, *Autobiography of Rev. Joseph Townend with Reminiscences of the Missionary Labours in Australia,* Second Edition, W. Reed, London, 1869, pp.2-3.
[75] Townend, *Autobiography of Rev. Joseph Townend*, p.9.

then eighteen years old, met an unknown local lady who on enquiring about his arm suggested he should go to Manchester Infirmary, where she told him he would receive the best advice and that this would be free.

His master, the mill owner, obtained from another gentleman a recommendation for him to be admitted as an inpatient at Manchester Infirmary. Townend provided a vivid description of the scene he observed on his arrival at the Infirmary, where 'I ventured amongst the crowd of halt and lame that were waiting for medicine and for the arrival of the doctors.'[76] It was then standard hospital practice to screen those in the waiting area and to separate and admit only those who were most likely to recover from those expected to die. The latter were denied admission as part of reducing hospital mortality and reporting increasing success rates.[77]

Townend described how he was taken several times to a consultation room where surgeons and others examined him and discussed his case. At the end of each consultation, 'my old doctor used to conclude with "well Joe, what's to be done?" my answer invariably being, 'I should like to have it cut, sir.'[78] He described the web of skin which resulted from his burns as extending between his right arm and his side and reaching halfway towards the thigh and stretching from the middle of his back around to the front of his chest.

Following another consultation and discussion, the 'man-nurse' wound a bandage around his head which covered his eyes and led him by hand to the operating theatre, where he was undressed and seated on a high seat. Although he could not see anyone, the voices were familiar. The surgeon told him that, if when he felt the knife, "you should jerk, or even stir – you will do it at the hazard of your life," [to which Townend replied] "no sir". After a moment of stillness:

> a hand grasped the huge web forcibly placing fingers and thumb close to my side and, with a forcible thrust, through went the knife, as near the pit of the arm as possible, and close to my side, with the sharp edge downward; the progress of the instrument I distinctly heard, and the pain was exquisite.[79]

Following surgery his wound was regularly dressed by the house-surgeon. On one of these occasions this person offered him his right hand in a greeting and when Townend stretched out his left or good hand, the house-surgeon struck it back and asked him whether

[76] Townend, *Autobiography of Rev. Joseph Townend,* p.9.
[77] McCullough, *John Gregory's Medical Ethics and the Reform of Medical Practice in Eighteenth-Century Edinburgh,* pp.86-92.
[78] Townend, *Autobiography of Rev. Joseph Townend,* pp.10-11.
[79] Townend, *Autobiography of Rev. Joseph Townend,* p.12.

he should offer a gentleman his left hand. He then seized his right hand, and dragged him off the bed and into the middle of the room where:

> with violence he struck at the same moment with one fist the knee, and with the other the elbow, sternly exclaiming - “stand up, man; you have not your mother for your nurse now!” Immediately my leg and foot were covered with blood; and on the web being loosened, I saw it turn black: and my poor side was drenched in blood.[80]

The skin web was subsequently treated with regular poultices and after fourteen days it dropped off and the area healed over. Despite such an experience, Townend referred to ‘those unmistakeable tokens of real kindness I shall never forget’, and how ‘my old doctor treated me with fatherly affection.’ He forgave the house-surgeon for what sounds like an isolated incident in an otherwise professional manner, as he described how for six weeks, this man:

> dressed my sores with the greatest tenderness and regularity. I always accounted for his harsh treatment, at the first dressing, on the ground of his extreme sensitiveness.[81]

The lengthy description by Townend of his experiences at Manchester Infirmary provides a helpful insight into the experiences of patients on the surgical wards of a hospital in the early nineteenth century. It also reflects how patients recognised and appreciated kindness despite the pain and suffering many of them had to endure.

The conclusions which can be drawn from Townend’s observations on the behaviour of his surgeons and his relationship with them was overall a positive one. He subsequently became a Methodist minister and later when writing his autobiography, he perceived the pain of his burns and subsequent surgery as a divine call upon his life. He was grateful for the overall quality of his care and portrayed even the disturbing parts in a constructive manner and saw it all as part of the accumulated experiences of life.

The final patient is Thomas Jackson (1785/6-1859) who served as a Sergeant in the Coldstream Guards during the 1813 -1814 British Army campaign in the Netherlands. On the eighth of March 1814 he suffered a severe injury to his right leg from a musket ball and three days later underwent an amputation of this limb. In his autobiography first published in 1847, Jackson described the events surrounding his injury and painful escape from the

[80] Townend, *Autobiography of Rev. Joseph Townend,* p.13.
[81] Townend, *Autobiography of Rev. Joseph Townend,* p.16.

battlefield.[82] He recounts his harrowing journey by cart and eventual arrival at a French barracks full of wounded and imprisoned soldiers. He was examined by an English surgeon and fellow prisoner, who after removing the foul-smelling piece of old rug covering his injury, said: 'oh sergeant, this must come off. I know it, sir said I; and the sooner the better. Will you please do it now?'[83] The surgeon replied that he was exhausted and would operate on him the next day.

On the afternoon of 11 March 1814, the surgeon and two assistants arrived followed by several Dutch onlookers' keen to see what was going to be done. When asked by the surgeon: 'How do you feel, sergeant? I said, Sir, I feel very low and weak, but am anxious to have this stinking leg off, he, smiling, said he was glad to hear such courage,' and began to prepare.[84] Jackson informed the surgeon that unless he had some wine, he feared he would sink under the operation, to which he agreed. Jackson was fixed upon the end of a long barrack table, sitting upright, with his legs hanging down. After he drank a pint of red wine it:

> wrought a wonderful effect and raised up my spirits to an invincible courage. Now gentlemen, said I, go on, if you please. The sergeant was preparing to blindfold me: Oh no, I said, I shall sit still, and see as well as rest.[85]

Jackson described the ripping up of his trousers and the taking down of the leg stocking low enough to enable the placing of a tourniquet, painfully tight above the knee. He described the extreme pain he suffered during the cutting with the knife, the use of a saw blunted from previous procedures to cut the bone, and the division of the tissues, the tying of the ligatures and the application of the dressings and bandages.

He described how all eyes were fixed on him:

> but I was too high spirited then to give way. The blood, quickly following the knife, spread around … at the sight of which, the frightened, but sympathising Dutch lookers on, screamed as though they were being cut. They pitied me very much and said, 'Poor sergeant-major'.[86]

The operation lasted about half an hour during which the surgeon and his assistants on finding him 'not squeamish, amused themselves by engaging my attention in a

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[82] T. Jackson, *Narrative of the Eventful Life of Thomas Jackson: Militiaman and Coldstream Sergeant, 1803-1815,* Josiah Allen & Son, London, 1847. (Reissued by Helion & Company Limited, with Notes by Eamon O'Keeffe, 2018).
[83] Jackson, *Narrative of the Eventful Life of Thomas Jackson,* p.77.
[84] Jackson, *Narrative of the Eventful Life of Thomas Jackson,* p.77.
[85] Jackson, *Narrative of the Eventful Life of Thomas Jackson,* p.77.
[86] Jackson, *Narrative of the Eventful Life of Thomas Jackson,* p.78.

conversation.'[87] It appears from Jackson's detailed description of his amputation that he observed the procedure in a similar manner to that of George Wilson.

This story provides a personal insight into the plight of servicemen who suffered serious battlefield injuries followed by surgery, and the relationship between a patient and his surgeon(s). Despite the horror of his operation, Jackson referred to his first surgeon as 'my noble doctor' and later as 'my kind doctor'. After his release and transfer to a British health station, he asked for his amputation stump to be dressed hoping this would relieve him of his ongoing pains. He remarked 'never shall I forget the intensity of suffering I endured in the first dressing. Military surgeons are not very nice about hurting one.'[88] This was in keeping with the opinions of contemporary servicemen of such surgeons and of an occupation which had yet to gain their confidence and that of their commanders.[89]

He was eventually transferred back to England where the healing of his amputation stump was prolonged due to recurrent infections, and which was attributed to the fracturing of the shin bone by the blunt saw. Jackson was finally united with his wife, but his autobiography reflects how he remained bitter about his injury and the emotional, physical, and economical struggles he endured as a war amputee. He described the consequences of the loss of a limb as a 'drag upon my affairs throughout my subsequent life.'[90]

In summary, Jackson as a battlefield experienced soldier would have been familiar with what an amputation involved and how military surgeons were viewed amongst the troops. Fortified with a large volume of wine, he chose to watch his amputation and even conversed with his surgeons throughout the operation. Despite the unfavourable circumstances of his amputation while he and his surgeon were both prisoners of war, Jackson portrayed his first surgeon as noble and kind. This contrasted with his description of military surgeons whom he described as not caring much about hurting their patients. It would take some time for this unfavourable reputation of battlefield-experienced surgeons to improve.[91]

Correspondence with Sir Astley Cooper

Sir Astley Cooper (1768-1841) was the most eminent surgeon and anatomist in Britain in the first half of the nineteenth century. After his appointment as a surgeon at Guy's Hospital in London, he became a pioneer in experimental and vascular surgery and developed many

[87] Jackson*, Narrative of the Eventful Life of Thomas Jackson,* p.78.
[88] Jackson, *Narrative of the Eventful Life of Thomas Jackson,* p. 83.
[89] Crumplin, Men of Steel, p.7.
[90] Jackson, *Narrative of the Eventful Life of Thomas Jackson,* p. xiv.
[91] Kelly, *War and the Militarization of British Army Medicine,* pp.4-5.

new operations. He received the Royal Society's highest honour – the Copley Medal - for his research and served as its Vice- President. He was twice elected President of the Royal College of Surgeons of London and made a Baronet after successfully removing a cyst from George IV's scalp. He was widely admired as a sympathetic and supportive surgeon and had an extensive private surgical practice.[92]

Although the search for demographic information on the patients who wrote letters to Cooper yielded limited information, there was sufficient to confirm that they or their spouses or families were from the upper and middle-class section of society. Some were members of the aristocracy, others were significant land holders, merchants, with the occasional clergyman, lawyer, retired serviceman and surgeon. One was a previous prime minister. The descriptive ability of the men and women who wrote these letters showed they were educated and confident individuals and some were knowledgeable about medical matters.

A number spent their holidays at various locations on the south coast of England or in the spa town of Bath. When this involved travelling through London, it was used as an opportunity for a face-to-face consultation with Cooper. At that time, face-to-face consultations with London surgeons occasionally took place during their professional visits to locations outside the capital. Why some letters survived from Cooper's extensive surgical practice and others failed to do so remains a mystery. It may reflect his research interests in breast cancer and his original plan to publish Part 2 of his *Illustrations of the Diseases of the Breast* (1829),[93] or, because these few escaped the destruction of his papers and diaries by his nephew and biographer Bransby Cooper.[94] Unfortunately, no letters from Cooper to these patients have survived.

The illnesses described in the medical histories in these letters covered a wide area of conditions, with the largest number being related to breast cancer. What is clearly demonstrated was the absolute faith and trust these patients had in Cooper. He was to many patients of that era the final arbiter on their management. Patients expected to benefit from consulting him and treated his recommendations with absolute respect, even when the treatment caused significant side effects or appeared to be of little benefit.

Of the fifty-six letters sent to Cooper, the thirty-three written by his patients demonstrated their respect and gratitude. There was no evidence that these patients as a group or their families were 'properly humble' as Dorothy Porter and Roy Porter suggested

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[92] B. Cooper, *The Life of Sir Astley Cooper Bart, Interspersed with Sketches from his Note-Books of Distinguished Contemporary Characters*, 2 vols, John W. Parker, London, 1843.
[93] Cooper, *Illustrations of the Diseases of the Breast in Two Parts – Part 1.*
[94] Cooper, *The Life of Sir Astley Cooper Bart*.

such corresponding patients tended to be.[95] Although the language used would in today's terms appear subservient, it was the etiquette for that period. Coming from broadly the same social class as Cooper many wrote as equals and some as friends. Overall, the letters were highly informative and provide an important insight into contemporary surgical practice and the plight of those with surgical conditions in the first half of the nineteenth century. The letters demonstrate the ability of these patients and their families to describe their symptoms and physical findings, their medications and side effects, and confirm that some were familiar with certain aspects of medicine. In only one letter was the question of consultation fees mentioned. John Hives - husband of Mrs Hives (MS008.2.1.9) - concluded his letter to Cooper with the words, 'when I am in town, I will then discharge anything you may have against me.' I presume this was referring to outstanding fees for a previous consultation.

Broadly speaking, the letters were seeking specific advice or an appointment in relation to their current symptoms or responding to a request from Cooper for an update on their health. Those seeking more general guidance asked him about common everyday matters such as the use of baths and the desirable water temperature and additives, swimming in the sea, and the use of diuretic vegetables, medicated vapour, plasters, pills, aperients, leeches, powders, lotions, rhubarb, bismuth, dandelion baths, caustics, donkey's milk, bandaging and even how long they should remain by the sea or 'taking the waters' in Bath.

For example, Maria Jones (MS008.2.2.4.) from Crickhowell in South Wales, enquired whether 'sea bathing … would be desirable for me and if bathing at Southampton is good - if not I can easily cross over to Cowes.' The husband of a Mrs Bellamy (MS008.2.2.3. part 3 of 3.) who was under Cooper's care with breast cancer, wrote to say his wife had been strongly urged by her friends 'to try the medicated vapour, but before she does so, perhaps you will have the kindness to say whether you approve of it'. Some wrote to share a new 'method of cure', one offered his body for anatomical dissection, and another – a previous patient at Guy's Hospital - sought money.

Several letters contained positive comments about Cooper and the quality of his care and reflected how dependant they had become upon him. John Wheelwright (MS008.2.2.3. part 2 of 3) from Buckinghamshire wrote of being 'emboldened by your kindness.' The husband of Lady Meade (MS0008.2.2.7.) wrote from Weymouth in Dorset to say, 'you are our sheet anchor and one at whose hands we have at all times experienced so much hope.' A Mrs Wood (MS008.2.2.4.) wrote from West Burton in Yorkshire that 'you were the means of saving my life', and a Mrs Francis White (MS008.2.2.4) from Thatcham in Berkshire

[95] Porter, Porter, *Patient's Progress,* p.77.

stated, ‘my life has been prolonged owing to my going to Sir Astley.’ For many he had become their only source of hope.

The only moderately strong words were those from Charles Jameson (MS008.2.2.4.) a merchant from Inverness, who wrote peremptorily, ‘it is easier to conceive than describe my disappointment in finding no prescription or relief in your letter, and it was still worse to leave it unfit to answer it for 8 or 10 days.’ The instructions Cooper gave in his prescriptions may have been in Latin as when Miss Lambert (MS008.2.2.4) from Hemsworth Hall in Pontefract Yorkshire, wrote seeking a new prescription, she requested ‘you will accompany it with directions for use in English.’

Diagnosis was uncertain and often varied between surgeons resulting in confusion and major stress for patients. Management options were limited and apart from the few who had surgery, the mainstay of treatment was a combination of pills, lotions, poultices, caustic, draughts, and aperients, each with their own side effects. Although bleeding as a form of treatment was still in vogue during the period of this study, only one patient - Charles Jameson from Inverness (MS008.2.2.4.) - alluded to this in a letter in which wrote about ‘bleeding to the extent of 3 g weight.’

These letters provided examples of the emotional and physical distress caused by the patients’ illnesses and the side effects of the medication or local treatment which Cooper had prescribed. These included pains in the teeth, jaws and abdomen, ulceration in the mouth and of the skin, vomiting, diarrhoea, drowsiness, and headaches. Despite these problems, and the lack of benefit of these treatments, the patients were unwilling to discontinue them without his permission. Mrs Hives (MS008. 2.2.6.) who lived in Leeds but spent much of her time in Hastings, requested her Leeds surgeon to write to Cooper. She asked that he be informed that her breast cancer was rapidly progressing, and that she had suspended the treatment he had prescribed, ‘on account of unpleasant and painful effects on the teeth and jaws and is desirous *by your permission* of discontinuing it altogether’ (my italics). Sir John Meade wrote that his wife Lady Meade (MS0002.2.7.) used ‘the caustic as often as she could endure the torture, which has been almost excruciating’ [and] ‘having lost all faith in the application of the caustic which was supposed would have helped, … and [that] continuing its application in so dangerous a situation and therefore request that you would be so good as to give what [else] to take.’ Miss Lambert (MS008.2.2.4) whom I previously mentioned, wrote about not ‘having medicine which would prove injurious to my general health as I am inclined to think the mercury disagreed with me considerably.’

Examples of the challenges of diagnosis and second opinions were exemplified in some of the letters. Mr J. Carnie from the town of Largs in Ayrshire (MS008.2.2.3, part 1 of

3), who described himself as ‘a retired surgeon in The Honourable East India Company’s Service’, wrote stating there was confusion between his local surgical colleagues as to whether he would benefit from having further surgery for his painful amputation stump. He wrote that he was prepared to travel to London to see him so that this confusion could be resolved. A surgeon-apothecary named Mr. J. Hudson, (MS008.2.1.9.) wrote to say he had diagnosed a lump in a woman’s breast as cancer and advised her to have an operation. This patient (from Eastbourne) then consulted the London surgeon Mr Everard Home during one of his visits to the Sussex village of Lancing. Home informed her it was not cancer, and that no surgery was required. Nevertheless, Hudson operated on the patient, and she survived another fourteen years, dying of an unrelated condition, and without ‘the slightest return of the disease.’ It was of course possible that her breast problem was not cancer.

One of the findings in these letters relates to the reluctance of patients to undergo surgery. The attitude of these women to breast surgery was one of fear and abhorrence as pointed out by Fearon, whom I have quoted earlier.[96] This was despite the confidence these patients had in Cooper’s known surgical skills and empathetic manner. Mrs Jane Watson (MS008.2.2.2. part 1 of 3) from Waterford in Ireland consulted Cooper about a lump in her breast tumour for which he recommended ‘immediate removal but she could not at that time submit.’ Ten months later and after the lump had increased in size despite the ‘daily plasters, aperient pills and occasional application of leeches’ he had prescribed, she sent a letter seeking ‘Sir Astley Cooper’s candid opinion whether from what she had now communicated he thinks there is still a prospect of her being relieved by an operation.’

Another woman, Mrs Sheath (MS008.2.2.4.) from Wyberton in Lincolnshire who had a lump in her right breast ‘skilfully extracted’ by Cooper three years previously, developed a new lump in the same breast. Her husband asked, ‘if it could possibly be discussed in reference to another operation … [adding] the thoughts of which make her as you may suppose very uneasy and dejected.’ He also wrote that he would ‘endeavour to prevail upon her to accompany me to London as soon as possible.’

The tone of many letters reflect desperation, hopelessness and even despair. This was perhaps not surprising given the symptoms described by some were consistent with advancing cancer. As an example, a surgeon-apothecary caring for a patient in Boston (MS008.2.2.3. part 2 of 3) wrote that ‘Mrs Sheath wishes you to order something to be applied to her forearm’ and pleaded ‘you must prescribe something.’ Another woman, Mrs Smith (MS008.2.2.3. part 2 of 3) described how the tumour had spread throughout the

[96] Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* 1784, pp. vi-vii.

breast, and even though she considered herself to be ‘a great sufferer’, the situation ‘has alarmed us all and makes us despair of a favourable result. Pray therefore indulge me with a few lines, and if you can hold out any hope, you will indeed give consolation.’ A letter written by Julia de Chard from Shepherdswell in Kent (MS008.2.2.3. part 3 of 3) informed him that her mother was dying of cancer and outlined the way the family were caring for her.

The reluctance of patients to undertake a long and challenging journey to London to see Cooper was evident in some letters. Miss Lempert (MS008.2.2.4.), was ‘desirous of having a more decided opinion as to whether you consider it necessary for one to go to town.’ She added that her husband ‘is quite willing to take me to town for a week if you wish but as I feel some alarm about the journey, I should only be induced to go by an assurance that you could not feel confident of a successful treatment without seeing me.’ Similarly, Mrs Julia Smith (MS008.2.2.4.) from Woburn in Bedfordshire wrote in response to ‘your wish that I should be constantly under your eye … [but] that would be both inconvenient and very disagreeable to Mr Smith and myself unless it was absolutely necessary and your particular desire.’ Mrs Jane Watson (MS008.2.2.2. part 1 of 3) from Waterford highlighted that travelling ‘to London appears a formidable addition but still she might be induced to undertake it if there appeared a probability of success.’

The challenges faced by the local surgeon-apothecaries in providing medical services to these patients is reflected in the letters. The thirteen letters from these practitioners described the patients’ symptoms and physical findings and included their own and the patient’s questions. These men who often struggled financially, played an important and challenging role in the care of such patients at a time when the patronage of the wealthy was still a major part of making a medical living.[97] Patients wished Cooper to remain involved in their management, and he also kept in touch with them by letter. Some patients did not consult their local surgeon-apothecaries for advice, and although the latter appeared to have been valued at least by some, by and large they played a subservient role. For example, Mrs Sheath (MS008.2.2.4) developed a breast lump but ‘disliked mentioning it to her apothecary’, leading to her husband writing directly to Cooper for advice. Another patient, Francis White (MS008.2.2.4.), then living in Thatcham, Berkshire, wrote to Cooper to say the breast lump she consulted him about eight years previously was no longer a problem. She added that, ‘I never let any medical gentleman see it before Sir Astley for as I resided in the country I had not sufficient confidence to think they could do me any good. The doctors in Derbyshire having little experience in such cases.’

[97] A. Digby, *Making a Medical Living, Doctors and Patients in the English Market for Medicine 1720-1911,* Cambridge University Press, 1994, pp.136-138.

Further insight on this issue is provided by a letter from Thomas Waddell from Scarborough (MS008.2.2.4.) who wrote to Cooper seeking advice for a ‘disagreeable tumour’ near his sciatic nerve. He wanted to know the ‘probable nature of the tumour’, and that if it needed to be removed, he would rather have it done in London by him as ‘country surgeons have but few operations, they therefore do not possess that expertise.’

The question of a possible lack of trust in the local surgeon-apothecary was shown in some letters. The fear that the surgeon-apothecary might fail to include all the details of a patient’s problems in his referral letter, prompted Mary Bradley (MS008.2.2.5) of Charlton-cum-Somertown to write directly to Cooper. After first thanking him for ‘the great kindness you showed for my case when with you’, she noted that her local surgeon-apothecary Mr Valentine was writing to him, ‘but I think it right to state my own view of my case.’ After providing a detailed account she added that she did not expect him (Cooper) to write to both Valentine and herself, but ‘when you write to the former, I trust you will give him every advice with regard to my approaching confinement particularly how to stop the bleeding.’ Mrs Sheath (MS008.2.2.7.) wrote in 1834 that ‘my maid servant thinks they are partly skimming over the facts.’ How much of this was due to the suspicion that they were not being fully informed by their local medical practitioner can only be speculated.

Examples of withholding the diagnosis from patients was reflected in some letters. In 1822, Mr Rosewarne, a surgeon-apothecary in Cornwall, referred Miss Hext (MS008.2.2.3. part 1 of 3.) with a two-year history of a breast lump to a Plymouth surgeon called Mr Howard. In his letter to Cooper, Rosewarne provided comprehensive details of the treatment he had prescribed including leeches, pills, purges and lotion, but without any improvement. He was seeking ‘advice preparatory to an operation for its removal.’ He added that:

> as Miss Hext is extremely anxious and agitated on the subject I have endeavoured as much as possible to keep the real nature of the complaint from her until imperious changes in it should oblige me to be more explicit and I still think the most cautious manner of proposing an operation would be necessary. I have as yet only ventured to hint at it.

A further example was that of Maria Wigg (MS008.2.1.9.) from Gosford in Suffolk who wrote a comprehensive letter to Cooper in which she described an enlarging ‘knot’ in her right breast which she had previously consulted him about. She stated, ‘I still feel apprehensive of a cancer and when most troubled with pain, am fearful you did not tell me exactly what it really was, therefore dear Sir your considered answer will be very acceptable to me and greatly ease my mind.’ This woman was concerned that Sir Astley had not informed her whether this was a cancer, and because of its increase in size, she had her

own suspicions. She wished to know the diagnosis, albeit still hoping for reassurance. Similarly, Mrs Busis (MS008.2.2.5.) from Hastings wrote to Cooper informing him that her breast swelling had increased in size since her last consultation with him and enquired 'what do think is the cause of my complaint as I never had anything like it before.' In the case of Mrs Hives (MS008.2.2.6.) from Leeds with recurrent breast cancer, her local surgeon included in his letter to Cooper that, 'should you think proper to make remarks on the case which you would not inform Mrs Hives and friends, may I request separate communications.'

Evidence of the reluctance or failure to fully inform these patients (as with Fanny Burney) of the diagnosis, raises the question of whether the medical practitioners involved, deliberately withheld the diagnosis of cancer and why they did so. Was this through compassion in wishing to lessen the patient's anxiety, or to defer this bad news for as long as possible? It could be argued at least in some cases, they were aware of the poor prognosis and wished to provide holistic care. From reading this group of letters, it appears to have been a combination of both factors.

One example of an ethical and a scientific approach to the management of an illness was demonstrated in a letter from Benjamin Dully to Cooper. Dully was a prominent surgeon-apothecary in Wellingborough, and one of Cooper's former students at Guy's Hospital. In his letter Dully sought advice about a Mrs Palmer (MS008.2.2.3. part 3 of 3) who had a tumour in the left breast. He described the history of her tumour and the lack of benefit from of the treatment which he had prescribed, including internal medicines and an external ointment. He provided details of the tumour having spread to the lymph glands in her armpit and which he said:

> deterred me from submitting to her the propriety of an operation … for in the few cases in which I have operated there has been the usual tendency to reproduction of the disease which precludes giving so favourable a prospect of real cure as patients generally require before submitting to a painful operation.

Dully did not wish to subject this woman to a painful operation because he believed it would not alter the course of her disease. In doing so he demonstrated compassion and an ethical and scientific approach, reflecting the concepts of a profession and the attributes of professionalism.

The comments made by some patients about the difficulties of travelling to London from the provinces and from Ireland, raises questions as to why Cooper expected his patients to undertake such a long and hazardous journey. This was even more so as he must have known that the treatments which he prescribed were unlikely to be beneficial to many of these patients and possibly even detrimental, as was pointed out by Benjamin Rush

and alluded to earlier. Was this because of vanity or the belief that he alone could offer helpful advice, or a lack of confidence in the local surgeon-apothecary, or perhaps a part of his compassion for these patients? Given the enormous challenges of travel, the lack of available beneficial treatment, and the increasing availability of knowledgeable surgeons in the provincial cities by this time, it is difficult not to conclude that maintaining his status and financial considerations played a part. Access to the letters written by Cooper to these patients might have provided further insight into this question.

Because Cooper plays such a prominent role in my efforts to assess the professionalism of contemporary surgeons, I have sought accounts of his life, practice, and personality, to gain a better insight into this man of great fame and fortune. This included a review of obituaries, letters and articles in newspapers, journals and the biographies published since his death in 1841. Cooper bequeathed his various notes, diaries, works and journals to his nephew and surgeon Bransby Cooper (1792-1853) so that he could use these in writing his official biography, which he duly completed in 1843.[98] It is clear from these sources that although Cooper was greatly admired and even revered in his lifetime, he was not without blemish. Not surprisingly, given his many achievements and royal recognition, he was the subject of jealousies and occasional rumours. In one obituary published in the *Provincial Medical & Surgical Journal* (later called the *British Medical Journal*), on Cooper's 'life, character, and writings', he was described as a person of impeccable and generous character, and the most outstanding surgeon, anatomist, scientist and writer of his era. Reference was made however to the 'illiberal attacks in the "Chronicle" ascribing avarice to Sir Astley' which the author sought to refute, although Cooper's professional income in one year was described in the same article as exceeding 21,000 guineas, or almost two million pounds in today's money.[99]

By and large, reviewers of Bransby Cooper's 'official' biography were critical of his partiality regarding the private and public character of his uncle. One reviewer considered the very high position which Cooper had attained should have given 'so rich a field for a biographer', and bemoaned 'the book is very little remarkable either for anecdote or entertaining correspondence', thereby denying the reader the pleasure of that which would have been more interesting about his life.[100] Although Cooper was said to have entered his professional career with all the advantageous aids of birth, position and fortune, his success

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[98] B. Cooper, *Life of Sir Astley Cooper*; *R. Brock, The Life and Work of Astley Cooper, E & S, Livingstone*, London, 1952; D. Burch, *Digging Up the Dead,* Chatto & Windus, London, 2007.

[99] 'Sir Astley Cooper, His Life, Character, and Writings', *Provincial Medical & Surgical Journal (1840-1842),* 1, 22 (1841) pp.353-355, https://www.jstor.com/stable/25490147, accessed 03 August 2020.

[100] 'The Life of Sir Astley Paston Cooper, Bart', *Dublin University Magazine,* 1833-1877, Dublin Vol 21, Iss, 124, 1843, pp.411-424.

was regarded as, 'in a great measure owing to his easy kindness of manner, steadiness of nerve, and pleasing personal appearance, qualifications which he possessed in an eminent degree.'[101]

Cooper's 'kindness of manner' and caring attitude to his patients seems at odds with his practice of arranging for his servants to procure dogs and cats for his experiments through stealing, and keeping as many as 'thirty dogs, besides other animals at one time in the hay-loft,- the subjects, or about to become so, of experiments.'[102] After the continental fashion for vivisection first arrived in Britain in the 1820s, many doctors distanced themselves from this practice for the sake of their own reputation. Cooper on the other hand became highly active in animal experimentation and Bransby Cooper defends his uncle's experiments on live animals based on the contributions he believed these made to the advance of surgery. Nowhere did he mention in his biography whether there were conflicts between his uncle and those who were against such experimentation. London pathologist and author Allan Bates, suggested in 2017 that the vivisection debate in early-nineteenth century Britain was 'more about virtue than utility', and the early opposition to vivisection was from the medical men who felt it would bring their profession into disrepute by linking them with cruelty.[103]

The second biography on Cooper was written on the centenary of his death in 1941 by the Guy's Hospital surgeon Sir Russell Brock, later Lord Brock, and published in 1952.[104] This work which tended to deify Cooper, was an analysis of his anatomical, surgical, and pathological studies. A more informative biography was published in 2007 by the Oxford physician and writer Druin Burch, in which he sought to discover the man 'behind the mask.'[105] He regarded Cooper's life 'was built upon the desire to look into things and see them clearly.'[106] He contrasted this with the destruction by his nephew Bransby, of Cooper's letters, diaries, journals and works. Although as Burch acknowledged this may have been part of Bransby's attempt to immortalise his uncle, and to 'preserve, praise and protect his memory', he regarded that in doing so, he betrayed 'the principles that represented the best part of his life.'

Burch acknowledged Cooper's many achievements and awards but suggested that he expected people to cope with pain and believed that he had the right to inflict pain on

[101] 'The Life of Sir Astley Paston Cooper, pp.411-424.
[102] Cooper, *The Life of Sir Astley Cooper Bart*, vol 1, p.334.
[103] A. Bates, *Anti-Vivisection and the Profession of Medicine: A Social History,* Palgrave Macmillan, UK, 2017, pp. 1-12.
[104] Brock, *The Life and Work of Astley Cooper*, 1952
[105] Burch, *Digging Up the Dead,* 2007.
[106] Burch, *Digging Up the Dead,* p.252.

animals for his research and education. He suspected 'that Astley's attitude drifted over occasionally, although probably not often, into cruelty and even sadism.'[107] This attitude was in sharp contrast to that of his contemporary colleague - Sir Charles Bell (1774-1842). This highly respected surgeon-scientist and discoverer of the motor and sensory nervous system, remarked to his brother George that 'I should be writing a third paper on nerves, but I cannot proceed without making some experiments, which are so unpleasant to make that I defer them.'[108] In conclusion and taking into account the patients' letters, Cooper's own writings, biographies, and the comments and articles written in newspapers and journals after his death, there is I believe sufficient evidence to conclude, that his behaviour as a surgeon reflected the attributes of professionalism.

Common themes from patients' experiences with surgeons

Several common themes were found in the analyses of the case histories and the letters. Overall, the relationships between the surgeons, surgeon-apothecaries and the patients were positive. Evidence was found that most surgeons were considerate and compassionate, and likewise, the patients were sympathetic to the stresses borne by the surgeons in performing their surgery. Patients acknowledged the kindness, support and understanding they received, and demonstrated in most cases the trust and confidence they had in their surgeons. Some thought the surgeons and surgeon-apothecaries were actively withholding important information from them. Although it would appear this was to allay or reduce the anxiety of the patients, in some cases it led to their agitation as they gradually became aware of the seriousness of their illness. Both groups of patients demonstrated their absolute dependence on their surgeons' advice. They were extremely reluctant to modify or discontinue what they had been prescribed without their surgeon's permission, even when there was little or no benefit, and in many cases serious side effects. What was striking was the reliance of these patients on their surgeons for advice on common everyday matters.

Although the correspondence with Cooper reflected the close and often warm professional relationships this surgeon had with his patients, the stories from the other group who had surgery reflected a more varied picture. Burney was full of praise for her main surgeon Larrey but was critical of the behaviour of her second surgeon Dubois. Similarly, Jackson described the different attitudes between the surgeons he encountered and Townend explained how their behaviour could vary between meetings. Although Wilson did not

[107] Burch, *Digging Up the Dead,* p.84.
[108] *Letters of Sir Charles Bell: Selected from his Correspondence with his Brother George Joseph Bell,* John Murray, London, 1870, p. 275, 281, 285, 294, 346, https://wellcomelibrary.org/item/b28034302, Accessed 2018-2020.

comment directly about his surgeons, he claimed that few surgeons had any concept of the pain endured by patients during surgery.

Embarrassment relating to breast examination, difficulties in diagnosis and varying advice regarding management were recurrent themes. Early in the nineteenth century, there were 'deeply felt notions of decency and what part of the body could be seen or touched.'[109] Fanny Burney found the contemplation of an examination of her breasts repugnant in 1810, but as she explained to her sister, this was partly because early on, she did not consider her breast problem to be a serious one. Most importantly, she advised her sisters and nieces to have an examination should they find themselves in a similar situation. One woman explained in her letter that she would not allow a local surgeon-apothecary to examine her breasts not because of embarrassment, but due to their lack of experience and knowledge in such cases. Modesty, a fear of cancer and an attempt to exercise some form of control over their diagnostic encounter may help to explain the reluctance of women to undergo such an examination. Furthermore, physical examination did not become commonplace until around the 1830s.

One of the challenges for the surgeon and anxieties for the patient lay in obtaining a reliable diagnosis upon which to base their management. In the case of an injury or infection of a limb, such as occurred with Joseph Townend, Thomas Jackson, and George Wilson, the diagnosis was obvious and the indications for surgery were to save the person's life or regain the use of a limb. For other ailments, and especially so in the early nineteenth century when diagnoses were based mainly on the person's symptoms, the powers of diagnosis were still imprecise.[110] This could lead to surgeons disagreeing on the diagnosis and treatment, leading to confusion and stress for the patient. This was exemplified in the case of Fanny Burney, Abigail Adams Smith and some of the patients described in the letters to Cooper. Further examples of confusion over diagnosis and management were provided by James Parkinson, and others were cited by Dorothy and Roy Porter, including the personal experience of the eminent Sussex surgeon and geologist Gideon Mantell when he sought a diagnosis for his severe back pain.[111]

In his introduction to *Illustrations of the Diseases of the Breast*, Sir Astley Cooper referred to the difficulties in the diagnosis of diseases of the breast and outlined different ways in which this could be improved. He observed the:

[109] Porter, Porter, *Patient's Progress,* pp.74-75.
[110] Digby, *Making a Medical Living*, pp.73-74.
[111] Parkinson, *The Hospital Pupil*, pp. 111-112; Porter, Porter, *Patient's Progress,* pp. 81-83; E. Curven, ed., The Journal of Gideon Mantell, Surgeon and Geologist Concerning the years 1816-1852, Oxford University Press, London, 1940, p.163.

> advantages to be able to discriminate curable from incurable cases; the dangerous from the slight; those which require surgical operation from those which do not demand them; and such as admit of a trifling operation from those which call for one of extreme severity.[112]

Cooper had some harsh words for those surgeons who failed to study and learn from their experience referring to them as 'the ignorant and unobserving member(s) of the profession.'[113] Reliability in diagnosis was improved by the German physician and pathologist Rudolf Virchow's (1821-1902) who discovered on microscopy in 1858, that diseases including cancer arose from abnormal cells in the tissues. However, it was not until special staining techniques of the tissue and cells with certain dyes were developed, that it became possible to have greater certainty of diagnosis on microscopy.

Vivid descriptions of the mental anguish, physical pain, and feelings of despair and hopelessness before and during surgery were provided by those who had operations. Similar feelings were expressed in the letters by those with symptoms of advancing cancer and experiencing serious side effects from their medications. Communicating about such personal events and particularly about their pain and suffering would have presented its own challenges. Some may have had difficulty describing their existing pain, recalling unpleasant agonies, or wished to avoid upsetting family or friends. Others may have been wary of being stigmatized as lacking in honour or fortitude. Wilson wished to repudiate the negative comments by some surgeons about anaesthesia. Townend may have described his surgical experiences to encourage others to seek a religious faith. Relating their symptoms could also have been therapeutic for some patients. As pointed out by Epstein, 'patients tell their stories, … in order to seek relief from physical complaints, but they may also want solace, … a cure through verbalization, [or] the talking cure.'[114]

Certain forms of surgery such as mastectomy, facial surgery or amputation can result in disfigurement or physical incapacity, aspects of which may be too sensitive to share. Burney did not conceal her mastectomy as she wrote to her sister, 'I entreat you to let all my dear Brethren male and female make a perusal', … [and] 'all others', whom she thought should read it.[115] That she did not mention sexuality issues relating to the disfigurement associated with her mastectomy was according to historian Edith Gelles, in keeping with the social convention of the time and a forbidden area of discourse.[116] This was in line with what

[112] Cooper, *Illustrations of the Diseases of the Breast*, pp.1-2.
[113] Cooper, *Illustrations of the Diseases of the Breast,* pp.1-3.
[114] Epstein, *Writing the* Unspeakable, p.152.
[115] Hemlow, *The Journals and Letters of Fanny Burney (Madame D'Arblay*), pp. 614-615.
[116] Gelles, Portia: *The World of Abigail* Adams, p.157.

historian Amanda Vickery found in her study of the diaries of Georgian women. The 'two topics that were virtually never canvassed, … were spirituality and sex.'[117]

Edith Gelles believed the explanation for the lack of available information about Abigail's Smith's diagnosis of breast cancer and mastectomy may have been due to the nature of her illness. Gelles considered that this would have been a 'forbidden area of discourse, [and because] public reference to female anatomy was proscribed by social convention, … Abigail was loath to discuss sexuality in writing.'[118] According to Julia Epstein, 'in the eighteenth and nineteenth centuries, the psychosexual implications of breast amputation are muted by the period's characteristic silence on the subject.'[119]

In the novel *Miss Sidney Bidulp* (1761), a young woman received 'a hurt in her breast, by falling against the sharp corner of a desk her breast from a stool, on which she stood in order to reach down a book', and this was regarded as the cause of her subsequent breast problem.[120] In Maria Edgeworth's novel *Belinda* (1801), Lady Delacour suffered an injury to her breast from an overcharged pistol during a duel and the residual painful swelling and deformity was regarded by her as a cancer.[121] Injury to the breast was then considered by the public and some contemporary surgeons as one of the causes of breast cancer.[122] Although external injury to the woman's breast was mentioned in three of the twenty-two cases described by Fearon, he did not specifically attribute the disease to this cause.[123]

On being urged to consult a surgeon, Lady Delacour replied, 'that I would not do – I could not – I will never consult a physician – I would not for the universe have my situation known, … if I lose admiration, what have I left? Would you have me live upon pity.'[124] Instead she hid the wound for fear that public knowledge would weaken her celebrity status. Because of increasing pain and her fear that she was dying, she later:

> determined to submit to the dreadful operation which alone can radically cure me, … but it must be kept a profound secret. I know of a person who could be got to perform the operation with the utmost secrecy, ... secrecy is my first object.[125]

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[117] Vickery, *The Gentleman's Daughter,* p.11.
[118] Gelles, *Portia: The World of Abigail* Adams, p.157.
[119] Epstein, *The Iron Pen*, pp.76-77.
[120] Sheridan, *Memoirs of Miss Sidney Bidulp*.
[121] Edgeworth, *Belinda*, pp.32-33, pp.57-58.
[122] M. Kaartinen, *Breast Cancer in the Eighteenth Century*, Pickering and Chatto, London, 2013, p.17.
[123] Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* 1784, pp.1-77,
[124] Edgeworth, *Belinda*, p.65.
[125] Edgeworth, *Belinda*, p.177.

The 'quack' or irregular surgeon she secretly consulted prevailed upon her to give up the idea of surgery, and 'to try some external remedy from which he promised wonders', and also large doses of laudanum, as was the usual practice for these irregular healers.[126] The external remedy prescribed by 'this vile wretch' as Lady Delacour later referred to him, was most likely some form of caustic as it led to ulceration and great suffering. She eventually agreed to consult a regular medical practitioner and a surgeon. They reassured her that her breast condition was benign and would recover spontaneously in time, and to cease taking the laudanum.

This novel provides insights into why women wished to conceal a breast problem, and their horror of possible surgery. Some women may have been concerned about the lack of confidentiality by the surgeon about the private details of their condition. However, Edgeworth's novel and the stories shared in this chapter demonstrated that patients did trust their surgeons to provide relief and even the possibility of cure.

The only reference which I could find that specifically mentioned issues relating to sexuality and breast surgery was in *Samuel Warren's Diary of A Physician* published in 1831.[127] However, this was not the diary of a patient and the story was narrated from a surgeon's perspective. Warren provided an account of a 27-year-old married woman who had undergone a mastectomy for breast cancer and how during his last visit to her home she alluded:

> distantly and delicately to the personal disfigurement she had suffered. I, of course, said all that was soothing. "But doctor, my husband---" said she, suddenly, while a faint crimson mantled on her cheek; adding falteringly, after a pause, "I think St—will love me yet!".[128]

Epstein cites the case of the English philosopher and writer Mary Astell (1636-1731) who died of breast cancer in 1731 and how her first biographer George Ballard wrote in 1755 that she had concealed this cancer from the world in such a manner, that even few of her intimate acquaintances knew anything at all of the matter. She:

> dressed and managed it herself, till she plainly perceived there was an absolute necessity for it being cut off: and then with the most intrepid resolution and courage, she went to the Reverend Mr. Johnson, a gentleman very eminent for his skill in

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[126] Rowley, *A Practical Treatise on Diseases of the Breast in Women*, pp. iv-vii; Fearon, *A Treatise on Cancers with a New and Successful Method of Operating, Particularly in Cancers of the Breast and Testis,* 1784, pp. i-ii.
[127] S. Warren, *Affecting Scenes: Being Passages from the Diary of a Physician*, J & J Harper, New York, 1831, pp. 44-50, http://catalog.haithitrust.org>Record, accessed 2017-2019.
[128] Warren, *Affecting Scenes: Being Passages from the Diary of a Physician*, pp.49-50.

> surgery (with only one person to attend her) entreating him to take it off in the most private manner imaginable: and would hardly allow him to have persons whom necessity required to be at the operation.[129]

The extraordinary lengths which Astell instituted to conceal her breast cancer and surgery emphasizes not only 'her stoic patience, her lack of struggle or resistance, and her silent resignation in the face of pain', but like Lady Delacour, 'the moral and sexual threat that breast disease and breast amputation posed for them', and Fanny Burney even if it was never explicitly addressed.[130] Similarly, the English writer Lady Mary Wortley Montagu (1689-1762) concealed her breast cancer until shortly before she died of this disease.

My conclusion is that most women of that period were unlikely to discuss their personal issues relating to such surgery and sexuality. It would take well over a hundred years before the importance of issues relating to mastectomy and sexuality became a recognised and important part of the surgical care of women with breast cancer.

Prior to the introduction of anaesthesia, most patients were either bound or held fast by assistants during surgery. Occasionally they remained free, but this would have required enormous stoicism on the part of the patient, as well as confidence by the surgeon that the patient could remain still for the duration of the operation. Wilson described how in submitting to be bound, he surrendered his liberty, and Burney who was not bound, described her feelings at the commencement of her surgery as one of hopelessness and total submission. Having a sense of control was shown many years later to be an essential part of the patient's ability to cope with the pain and anxiety of surgery.[131]

Conclusions

The aims of this chapter were to investigate the patients' perceptions of their encounters with surgeons, during consultations, surgery, and other forms of management, in order to establish whether their behaviour reflected the attributes of professionalism and standards of care in keeping with those expected from a profession. An analysis was carried out on the stories of a group of patients who had surgery prior to the advent of anaesthesia, and of letters sent by a different group of patients and their families to an eminent surgeon. This analysis sought information on the demography of the patients, their medical histories, and reasons for seeking advice, their expectations, and the eventual outcomes.

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[129] Epstein, *The Iron Pen*, pp.77-78; G. Ballard, *Memoirs of British Ladies, who have been Celebrated for their Writings or Skill in the Learned Languages,* Arts and Sciences,2d ed, T. Evans, London, p. 316.
[130] Epstein, *The Iron Pen*, pp.78-79.
[131] R. Melzack, P. Wall, *The Challenge of Pain,* Penguin Books, London, 2008, p.25.

The patients described in the stories and letters were with a few exceptions, wealthy, well-educated, and frequently conversant with medical conditions. They presented with a spectrum of ailments for which some had surgery whilst others were prescribed various medications and lotions. Apart from questions related to their immediate illnesses and prescribed medications, the enquiries in the letters focused on everyday matters.

The findings from the case histories and the letters suggest that patients experienced a range of attitudes amongst the surgeons they consulted. Their perceptions of their surgeons varied from the few whom they considered as arrogant and dominant, and with little understanding of their suffering, to the majority who were considerate, compassionate, and empathetic. Equally, the patients showed empathy for their surgeons. The patients' overall opinion of the surgeons they encountered was a positive one, with an appreciation of the kindness, and support they experienced. Based on these analyses, it is concluded that the behaviour of most of the surgeons involved in these encounters demonstrated the attributes of professionalism and standards of care in keeping with the requirements of a profession during that era.

Common themes included reticence about breast examination and surgery, or the sharing of such details, the unreliability of diagnosis and varying opinions offered on management, a lack of information from the surgeons - most likely to reduce their patient's anxiety - but often interpreted by them as withholding important material, and the emotional and physical torment associated with their surgery and some medications. Both groups of patients were very reliant on their surgeons not just for high level advice about their illnesses but also for simple every-day life matters. Patients were extremely reluctant to discontinue the medications they were prescribed without first obtaining the surgeon's consent, even in the face of severe side effects and little benefit.

Having established the patients' perceptions of the professional behaviour of their surgeons, it is equally important to examine how the surgeons discerned their own conduct during these encounters. The next chapter will seek to answer this question by analysing the personal accounts provided by surgeons on their sensibilities, feelings and emotions during these events, and the professional attributes they considered important in a surgeon.

Chapter 6

Sensibilities, Emotions, Mindset & Desirable Attributes of Surgeons

Introduction

An important question to be addressed in this thesis with its focus on the professionalization of surgeons and surgery, relates to the sensibilities, emotions, and mindset of contemporary surgeons, and the associated attributes of professionalism which they regarded as desirable for surgical practice. There is a scarcity of information on the history of emotions in surgeons and the relationship between these and the practice of surgery in both the civilian and military spheres. In an essay on the history of emotions from 2002, historian Barbara Rosenwein remarked that most historians shied away from the topic as emotions seemed peripheral to the historical enterprise.[1] However, the historical study of emotions has expanded rapidly in recent years although not in the historiography of surgery. And yet, as historian Michael Brown has observed, surgery is 'one of the most profoundly challenging emotional, psychological and physiological experiences that, as a patient, it is possible to undergo.'[2] And so it must have been for the surgeons who performed this surgery. As historian Thomas Schlich has noted, a surgeon's work includes affective as well as technical and ethical dimensions.[3]

The aims of this chapter are therefore twofold. The first is to explore the emotions experienced by surgeons in peacetime and in war during the late eighteenth and early nineteenth centuries, and how these emotions shaped their identities and behaviour. I will explore this by analysing the comments made by contemporary surgeons on their emotions during their encounters with patients, and whether the efforts made during their prior education and training were successful in preparing them to cope with these distressing demands. The second aim is to identify the attributes and values which surgeons considered were most important in meeting the day-to-day requirements of a surgical practitioner. These included the appropriate care of their patients as well as their personal ability and self-control to cope with the stresses and conflicting demands placed upon a surgeon. These will be sought through a review of the comments made by surgeons in their writings and lectures.

To undertake the first aim, I will employ a history of emotions framework which situates my study predominantly within the Romantic era. I will also use the concept of

[1] Rosenwein, 'Review Essay: Worrying about Emotions in History', p.821.
[2] Brown, 'Surgery and Emotions, The Era Before Anaesthetics', pp.327-347.
[3] T. Schlich, "The Days of Brilliancy are Past": Skill, Styles and the Changing Rules of Surgical Performance, ca. 1820-1920', *Medical History*, 59, 3 (2016), pp.379-403.

emotional expression or 'emotives' described by historian William Reddy in 2001, to try and understand the emotions of surgeons, the relationship between their emotional sensations and expressions, and how these shaped their identity.[4] Reddy regarded emotion and emotional expression as interacting in a dynamic way. He defined emotions as 'goal-relevant activations of thought material that exceed the translating capacity of attention within a short time horizon.'[5] By translating capacity of attention he meant translated into action, utterances or emotional expressions.[6] By analogy with speech acts, Reddy regarded such expressions as having a 'descriptive appearance, a relational intent [communicate meaning], [and] self-exploring and self-altering effects.'[7] Because of this third feature, emotional expressions - which Reddy called 'emotives' - are 'like performances.'[8] Schlich noted that the skills demonstrated in 'a surgical operation possesses the character of a performance.'[9] Whitfield and Schlich posed the question as to 'whether or not emotions could plausibly count as skilful', and concluded that 'historically speaking, the answer [was] a resounding yes.'[10] Emotions or emotional expressions are therefore an integral part of the skills of the performance of a surgeon.

For Reddy, the acceptability of emotional expression was determined by the dominant emotional regime of the time which in the period of my study was Romantic sentimentalism.[11] Sentimentalism or the practice of being sentimental is defined as the 'tendency to be swayed by emotion rather than reason', and was one of the hallmarks of the Romantic period (1780 -1850), unlike the previous Enlightenment (1715 – 1789) which was an intellectual movement that emphasized reason and science.[12] Reddy described sentimentalism as having achieved the status of 'a kind of political and personal common sense by the 1780s', and a time when new ideas about emotions and new emotional practices took shape such as the egalitarian saloon, the Masonic lodge, and intense friendships and correspondence networks.[13]

According to Brown, in terms of surgery, or what he called 'Romantic Surgery', the professional culture of the Romantic era drew heavily on:

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[4] W. Reddy, *The Navigation of Feeling: A Framework for the History of Emotions*, Cambridge University Press, Cambridge, 2001.
[5] Reddy, *The Navigation of* Feeling, p.128
[6] Reddy, *The Navigation of Feeling*, p.111.
[7] Reddy, *The Navigation of Feeling*, p.111.
[8] Reddy, *The Navigation of Feeling*, p.111.
[9] T. Schlich, "The Days of Brilliancy are Past", p.382.
[10] Whitfield, Schlich, 'Skills through History', pp.352-353.
[11] M. Brown, 'Wounds and Wonder: Emotion and War in the Cultures of Romantic Surgery', *Journal of Eighteenth-Century Study,* 43, 2 (2020), pp.239-259.
[12] 'The Shorter Oxford English Dictionary', L. Brown, ed., Clarendon Press, Oxford, 1993.
[13] Reddy, *The Navigation of Feeling*, p.325.

> forms of sensibility that increasingly emphasized emotional intensity and authenticity, [which] together with the power of imagination … allowed for a deeply subjective engagement with the patient's sufferings which shaped the therapeutic encounter in profound ways.[14]

Brown also noted that another characteristic of this Romantic culture was the 'importance of emotional experience and the extent of emotional introspection involved in shaping of surgical identities' of that period. He cited *The Making of Modern Self*, by cultural historian Dror Wahrman in which the author describes the radical changes which occurred in notions of self and personal identity towards the end of the eighteenth century.[15]

One of the challenges of the Georgian and the early Victorian eras that I have chosen to study is that they spanned a rapidly changing period in history. This was a period which was greatly influenced by the Enlightenment and the Romantic era, and the Industrial Revolution. It was therefore a time of constant change for the different generations of practising surgeons. It also included the Revolutionary and Napoleonic Wars (1792 and 1815), sometimes referred to as the 'Romantic Wars.'[16] British surgeons were heavily involved in these wars, which have been described by the military historian Yuval Harari as 'the ultimate experience.'[17] They were also described by Brown as 'rich in pathos and distinct from anything in civil life', and by Harari, as an experience upon which the 'flesh witnessing' veterans based their authority about war.[18]

Harari has also noted that during the period 1740-1865, (which corresponds roughly to the period of my study), war became a 'revelatory experience, … [and] that the Enlightenment, the culture of sensitivity, and Romanticism led soldiers to begin seeing war as an agent of revelation.'[19] This could equally be applied to those surgeons who served in these wars. It is therefore difficult to generalise the emotions of surgeons across this long and defining period of history. To help achieve the aims of this study, I will lean heavily on the research findings described by Peter Stanley and Mike Brown on the experiences and emotions of surgeons during war surgery.[20]

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[14] Brown, 'Wounds and Wonder', pp.239-259.
[15] Brown, 'Wounds and Wonder', pp.239-259; D. Wahrman, *The Making of The Modern Self: Identity and Culture in Eighteenth Century England*, Yale University Press, New Haven and London, 2004.
[16] P. Shaw, 'Introduction', in P. Shaw, ed., *Romantic Wars, Studies in Culture and Conflict 1793-1822*, Ashgate, Aldershot, 2000, pp.1-12.
[17] Y. Harari, *The Ultimate Experience: Battlefield Revelations and the Making of Modern War Culture, 1450-2000,* Palgrave Macmillan, Basingstoke, 2008.
[18] Brown, 'Wounds and Wonder', pp.239-259; Y. Harari, *The Ultimate Experience,* p.7.
[19] Harari, *The Ultimate* Experience, p.22.
[20] Stanley, *For Fear of* Pain, pp.97-129; Brown, 'Wounds and Wonder', pp.239-259; Brown, 'Surgery and Emotion: The Era Before Anaesthetics', pp.327-347; M. Brown, 'Redeeming Mr Sawbone: Compassion and

In the early part of my study period, the public image of a surgeon was frequently that of a robust, callous, and emotionless person, keen to operate and lacking in sensibility towards the pain and suffering of their patients. According to historian Joanna Bourke, the accusation that surgeons and other practitioners lacked sympathy or were at risk of becoming 'emotionally hardened' by their job' was heard throughout the centuries. This resulted in surgeons refuting this stigmatization of insensitivity on the grounds that they were gentlemen with innate sensibilities, and of professional and scientific standing.[21]

In terms of their alleged lack of personal sensibility, historian Lynda Payne claimed in 2007 that surgeons learned how to detach themselves from the more repellent aspects of their art, while in 1995 historian Roselyn Rey described this not so much a detachment but as an outward sign that their awareness of the pain they inflicted was merely being set aside for the duration of the operation.[22] Historian Martin Pernick stated in 1983 that 'the emotional outlook required to practice such painful cures was an acquired skill', and that for many early nineteenth-century surgical students, 'learning to inflict pain … constituted the single hardest part of their professional training, and those who were unable to learn to accept the value of suffering had to leave the profession.'[23] However, Brown regarded compassion and emotional expression as having played an important part in shaping the culture of early nineteenth-century surgery as well as determining the professional identities of the surgeons, and placed emotions at the heart of the doctor-patient relationship.[24]

In the broader context of the medical profession, the question of the ability to undertake skilled and demanding procedures has become a popular area of research interest for modern historians and sociologists. In a recent editorial which examined *Skills through History,* historians Nicholas Whitfield and Thomas Schlich posed the question, 'what is it that allows or restricts a skilful performance?'[25] Citing Barbara Rosenwein and science historian Paul White, Whitfield and Schlich observed that 'in the history of science, a skilled performance has often been connected to particular affective regimes, typically involving self-control, emotional restraint and the tempering of passions.'[26] White observed that in the

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Care in the Cultures of Nineteenth-Century Surgery', *Journal of Compassionate Healthcare* 4.13 (2017), https://doi.org/10.1186/s40639-017-0042-2, Accessed 2017-2020; M. Brown, 'Surgery, Identity and Embodied Emotion: John Bell, James Gregory and the Edinburgh "Medical War"', *History* 104, 359 (2019), pp.19-41, https://doi.org/10.1111/1468-229X.12720, Accessed 2019.

[21] J. Bourke, 'Pain, Sympathy and the Medical Encounter between the Mid-Eighteenth and the Mid-Twentieth Centuries', *Historical Research,* 85, 229 (2012), pp.430-452.

[22] Payne, *With Words and Knives*, p.1; R. Rey, *The History of Pain*, p.67.

[23] Pernick, 'The Calculus of Suffering in Nineteenth-Century Surgery', p. 27.

[24] Brown, *Surgery and Emotions,* pp.326 – 348; Brown, 'Redeeming Mr. Sawbone', pp.1-7

[25] Whitfield, Schlich, 'Editorial: Skills Through History', p.352.

[26] Whitfield, Schlich, 'Editorial: Skills Through History', p.352, B. Rosenwein, 'Review Essay: Worrying about the Emotions', pp. 827, P. White, 'The Emotional Economy of Science: Introduction', *Isis,* 100, 4 (2009), pp.811-26.

nineteenth century and afterwards, scientists 'have a history of objectivity: a narrative about discipline and detachment in which emotions, regarded as impediments to accuracy, are firmly suppressed in scientific practice and forms of representation.'[27]

Whitfield and Schlich have shown that the history of medicine offers similar examples. They cited studies which have 'scrutinised the evolution of surgical decorum', to make the following conclusions:

> at one extreme is the cultivated indifference of the modern physician, who wields disinterest in the face of adversity and human suffering, a detachment founded historically on a contrast between emotional excess, which is seen to interfere with skill, and emotional restraint, which enables it. In the domain of emotional restraint, it is the surgeon who is the undisputed master, as attested to in a wealth of historical and ethnographic studies that have scrutinised the evolution of surgical decorum.[28]

Whitfield and Schlich also noted that when the neurologist and psychoanalyst Sigmund Freud recommended 'emotional coldness' for physicians who wished to practise psychoanalysis, he cited the example of the surgeon who 'puts aside all his feeling, even his human sympathy, and concentrates his mental forces on the single aim of performing the operation as skilfully as possible.'[29] This is similar to Rey's statement of surgeons setting aside their feelings for the duration the performance of an operation.

Rosenwein considered 'the physical and mental capacity to have emotions is universal, but the ways those emotions are themselves elicited, felt, and expressed depend on cultural norms as well as individual proclivities.'[30] She also believed emotions depended on language, cultural practices, expectations, and moral beliefs, and that every culture 'has its rules for feelings and behaviour; every culture thus exerts certain restraints while favouring certain forms of expressivity.'[31] According to Rosenwein, people lived – and live – in what she called, 'emotional communities' similar to social communities like families, neighbourhoods, guilds and parish church membership.[32] Surgeons belonged (and continue

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[27] White, 'The Emotional Economy of Science: Introduction', p.812.
[28] Whitfield, Schlich, 'Editorial: Skills Through History', p.352; L. Payne, *With Words and Knives,* pp.84-89; Stanley, *For Fear of Pain*; C. Lawrence, 'Medical Minds, Surgical Bodies: Corporeality and the Doctors', in C. Lawrence and S. Shapin, eds., *Science Incarnate: Historical Embodiment of Natural Knowledge* , University of Chicago Press, Chicago, 1998, pp.156-201; R. Kneebone, A. Woods, 'Recapturing the History of Surgical Practice through Simulation-based Re-enactment', *Medical History*, 58 (2014), pp.106-121.
[29] Whitfield, Schlich, 'Editorial: Skills Through History', p.352; S. Freud, 'Recommendations to Physicians Practicing Psycho-Analysis' (1912), in, *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, Volume 12, James Strachey (trans), Hogarth Press and the Institute of Psychoanalysis, London, 1958, p. 115.
[30] Rosenwein, 'Review Essay', pp.836-837.
[31] Rosenwein, 'Review Essay', p.837.
[32] Rosenwein, 'Review Essay', pp.836-837, pp.842.

to belong) to such groups and Payne regarded surgeons and anatomists as part of such emotional communities in early modern England.[33]

Rosenwein called for historians to consider and analyse these emotional communities or systems of feelings to which individuals belonged in any time period and culture.[34] Historian Fay Alberti has remarked that emotional experiences have always been embodied in, and irremovable from, the broader assumptions and beliefs of a wider social milieu and that:

> analysing emotions as experiences and representations situated in the practice of everyday life helps us to move away from the construction of emotions as abstract entities, … and toward a socially constituted interpretation.[35]

In the case of surgeons - many of whom were also anatomists – it is the socially constituted interpretation of the modes of emotional expression they exhibited, expected, encouraged, tolerated, and repressed within their everyday lives that are important in this study of the professionalization of surgery.

In Chapter 5, an analysis of patients' perceptions of their surgeons found the majority displayed humanity and compassion. But how did these surgeons perceive their own sensibilities and emotions? In the next section I will explore this question through their writings and lectures.

Testimonies of surgeons about their emotions and feelings

A search for information on the emotions and feelings of surgeons before, during and after surgery, revealed a number of personal accounts and anecdotes from those who practised surgery in peacetime and from those who crossed the divide into battlefield surgery. The English surgeon and anatomist William Cheselden (1688 –1752), was widely admired for his surgical skills and yet he struggled with his emotions before carrying out every operation. In the seventh edition of his book *The Anatomy of the Human Body*, published in 1750, he added the following important statement regarding his famed expertise:

> if I have any reputation in this way, I have earn'd it dearly, for no one ever endured more anxiety and sickness before an operation, yet from the time I began to operate, all uneasiness ceased; and if I have had better success than some others, I do not

[33] Payne, *With Words and Knives,* p.4.
[34] Rosenwein, 'Review Essay', p.842.
[35] F. Alberti, 'The Emotional Economy of Science: Bodies, Hearts, and Minds: Why Emotions Matter to Historians of Science and Medicine', *Isis*, 100, 4 (2009), pp.798-810.

impute it to more knowledge, but to the happiness of a mind that was never ruffled or disconcerted, and a hand that never trembled during an operation.[36]

Historian Drewry Ottley wrote in his biography on *The Life of John Hunter* published in 1835, that 'Cheselden's manners were exceedingly kind and gentle.'[37] In an accompanying footnote Ottley added, that such feelings were far more commonly experienced than was generally supposed, and by the best surgeons before undertaking operations.[38]

Similar feelings were also attributed to William Cooper (1724 - c.1800) who was a respected surgeon at Guy's Hospital. He was described by his nephew and surgeon Sir Astley Cooper, 'as a man of great feeling, too much so to be a surgeon', and recounted that on one occasion as his uncle was about to amputate a man's leg, the man became terrified, jumped off the operating table and hobbled off. Instead of following the man and pressuring him to return and submit to the necessary surgery, William Cooper 'turned round, and said, apparently much relieved by his departure, By G---d, I am glad he's gone.'[39] The comment by Astley Cooper that his uncle had too much feeling to be a surgeon acknowledges the need for resilience but must not be misconstrued as a lack of sympathy on the part of Astley Cooper. In his extensive lectures, he reminded his students of the importance of 'gentleness of manners' in surgical practice.

James Wardrop (1782-1869) was a popular Scottish surgeon and ophthalmologist who practised in Edinburgh and later in London. He was educated at St Andrew's University and later studied in London and Paris. He became a Fellow of the Royal College of Surgeons of Edinburgh and of England and of the Royal Society of Edinburgh and served as Surgeon-in-Ordinary to the Prince Regent. He was popular with his students, one of whom wrote, 'he is a very clever anatomist and good dissector.'[40] In 1833 Wardrop explained to his students that no surgeon who had ever performed an operation properly would tell them that it was easily done. He also told them that any surgeon 'who pretends that the performance of an operation costs him little trouble, must either do them indifferently, or, if he had taken more pains, would have done them much better.'[41] He underlined this message by pointing out that:

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[36] W. Cheselden, *The Anatomy of The Human Body*, V11 Edition, C. Hitch & R. Dodsley, London,1750, pp.333-334.
[37] D. Ottley, *The Life off John Hunter: Containing a New Memoir of the Author*, Longman, Rees and Orm, London, 1835, p.9. https://books.google.co.nzbooks accessed 28.08.19.
[38] Ottley, *The Life off John Hunter*, p.9.
[39] Cooper, *The Life of Sir Astley Cooper Bart*, pp.300-301.
[40] J. Ford, 'A Medical Student at St Thomas's Hospital, 1801 – 1802, The Weeks Family Letters'*, Medical History Supplement,* 7, (1987), p.239.
[41] J. Wardrop, 'Lectures on Surgery: Introductory Discourse'*, The Lancet,* II, July 6, (1833), pp.454-455.

> the most experienced, and best surgeons have all declared, that however collected and composed their minds have been during the performance of an operation, yet they have always suffered anxiety before it commenced.[42]

There were several other surgeons about whom it has been claimed did not enjoy performing surgery. The London surgeon, anatomist and physiologist William Cruikshank (1745 -1800) was known for his compassion towards his patients but said to suffer so much 'nervousness' before an operation that it 'prevented him from being an outstanding surgeon.'[43] John Abernethy (1764-1831) was a surgeon at St Bartholomew's Hospital, a Fellow of the Royal Society and President of the Royal College of Surgeons of London. He was a popular lecturer and founder of the St Bartholomew's medical school. While on his way to perform a major operation he was asked by a colleague "how are you, how do you feel today?", to which he replied, 'Sir, I feel as if I was going to be hanged.'[44] The Scottish surgeon Robert Liston (1794-1847) who practised in Edinburgh and later in London and was celebrated for his operative speed and dexterity, was described by a colleague as having 'lost many an hour's sleep, and many a meal, by mental anxiety in the preparation of operation.'[45]

Haematologist and medical historian Jacalyn Duffin noted that the famous surgeon John Hunter (1728-1793) was 'said to have hated performing operations because of the pain they caused patients.'[46] The origin of this frequently made observation about John Hunter is difficult to find, and although it does not imply this claim is untrue, it means that historians must rely on the less powerful circumstantial evidence. It is possible that John Hunter was influenced by his extensive surgical experience during the Peninsular Wars, and perhaps more aware than some others of the limitations of surgery based on his experience and from his extensive research. Proof that his brother William (1718-1783) had a dislike for surgery is more secure. Based on a biography of William Hunter, Payne noted that he was said to be squeamish about operations. She cited a letter by his brother John in which he wrote that William, 'at first … practiced both surgery and midwifery, but to the former of these he always had an aversion because he hated operations, would often faint at an operation.'[47]

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[42] Wardrop, 'Lectures on Surgery: Introductory Discourse*',* pp.454-455.
[43] C. Morgan, 'Surgery and Surgeons in 18th- Century London', *Annals of The Royal College of Surgeons of England,* 42, (1968), p.24.
[44] J. Miller, *Surgical Experience with Chloroform,* Sutherland & Knox, Edinburgh, 1848, p.29.
[45] Miller, *Surgical Experience with Chloroform,* p.29.
[46] J. Duffin, *History of Medicine: A Scandalously Short Introduction*, 2nd ed, University of Toronto Press, Toronto, 2010, p.258.
[47] Payne, *With Words and Knives,* p.111; C. Brock, 'William Hunter a Reassessment', in C. Brock, ed., *S. Simmons and John Hunter, An Account of the Life and Writings of the Late William Hunter (1783),* Glasgow University Press, Glasgow, 1983, p.7.

Frederic Skey (1798-1872) was educated in Edinburgh, Paris and London and later appointed as a surgeon at St Bartholomew's Hospital where he was recognised as an able diagnostician and dextrous operator. He was regarded as an outstanding teacher of anatomy and surgery, friendly towards and enormously influential over medical students. He was a Fellow of the Royal Society, President of the Royal College of Surgeons of England and received a Civil Knight Grand Cross Star of The Most Honourable Order of the Bath (CB) for public services. Skey wrote in his textbook *Operative Surgery* (1850) that 'a man is disqualified for their duties who cannot … in imagination place himself in the position of his patient, and reflect on the case in all its bearings, and calculate the result as if though his own personal health were directly involved.'[48]

John Bell (1763-1820) was born in Edinburgh and educated at the University of Edinburgh. He later became a Fellow of the Royal College of Surgeons of Edinburgh, a prominent anatomist and noted surgeon and writer. He was known as a man of compassion with a holistic approach to surgery. He was concerned and outspoken about the unnecessary pain and suffering caused by incompetent surgeons. His forthrightness on these and other issues eventually led to costly personal differences with his many medical adversaries and in particular the Edinburgh physician John Gregory (1753-1821).[49] Sir Charles Bell (1774-1842) was John's younger brother and educated at the University of Edinburgh and with John. He became a Fellow of the Royal College of Surgeons of Edinburgh and of England, a Fellow of The Royal Society of Edinburgh and of London and a founder of the Middlesex Hospital medical school. He was also a scientist, theologian, and distinguished artist who was knighted by William IV.

The writings of these two brothers provides examples of surgeons who used their imagination to understand and engage with their patients' sufferings. Using Reddy's history of emotions framework, Brown placed the writings and experiences of Charles and John Bell about surgery within the broader cultures of the Romantic era as I explained in the introduction of this chapter.[50] Brown has highlighted the importance of emotional experience and introspection in shaping of identities of surgeons of that period and examples of this can be found in the writings of the Bell brothers and particularly by Charles. Neither Charles nor John were military surgeons, nor had either any direct experience of battle and therefore

[48] F. Skey, *Operative Surgery*, John Churchill, London,1850, p.3. http://archive.org/stream/operativesurgery00#page/n7/mode/2up. Accessed repeatedly 2017 to 2020.
[49] Brown, 'Surgery, Identity, and Embodied Emotion: John Bell, James Gregory and the Edinburgh 'Medical War', History, 104, 359 (2019), pp.19-41, https://onlinelibrary.wiley.com/doi/10.1111/1468-229X.12720. Accessed 2020.
[50] Brown, 'Surgery and Emotion', pp.327-347.

could not be regarded as having the authority of the so called 'flesh-witnessing surgeons.'[51] Indeed Samuel Johnson's comment that 'every man meanly thinks of himself for not having been a soldier, or not having been to sea', could be said to be reflected in some of their writings.[52]

Charles straddled the civil-military divide when he went to Belgium immediately after the Battle of Waterloo (1815) to help treat the injured. This enabled him to describe in his words, sketches and paintings, his emotions and conceptions of the suffering endured by wounded soldiers still lying in the battlefield and clearing stations when he arrived, as well as those upon whom he performed surgery. Both men imagined themselves as battlefield surgeons and John who had practical experience of treating war wounds on returned Scottish sailors and marines, agitated for a role in in the training of military surgeons.[53]

Writing firstly about his experiences in civilian surgical practice, Charles referred in his 1814 textbook *A System of Operative Surgery*, to the 'oppressive feelings' experienced by a surgeon while preparing to perform an operation, and which he called 'this painful duty.'[54] He advised every surgeon to carefully prepare all aspects of the case on the eve of a great operation and explained that:

> he cannot do his duty to his patient or his own reputation, without arranging the probable occurrences in his mind, that by anticipating he may avoid embarrassment, maintain his self-possession undisturbed, and save himself from the distraction of consultation and whispering during the crisis of his patient's fate.[55]

In addition to the emotions he experienced prior to surgery, these continued during the procedure itself. In a letter to his wife Marion in 1818, he wrote, 'I have just been performing a serious operation, and that, you know, is always severe upon me.'[56] Clearly these feelings remained with him throughout his life, as in another letter to her in 1841 – the year prior to his death – he wrote, 'I get wearied – exhausted by the sufferings of others.'[57] In a series of letters to his brother George, he wrote that 'I should be writing a third paper on nerves, but I cannot proceed without making some experiments, which are so unpleasant to make that I

[51] Harari, *The Ultimate* Experience, pp.7-20.
[52] R. Johnson, (ed.), 'Selections from James Boswell's Life of Samuel Johnson', Clarendon Press, Oxford, 1823, p.147.
[53] Brown, 'Wounds and Wonder', pp.239-259.
[54] C. Bell, *A System of Operative Surgery, Founded on The Basis of Anatomy*, Second Edition, 2 vols, Longman, Hurst, Rees, Orme and Brown, London, 1814, p. vii.
[55] Bell, *A System of Operative Surgery*, pp. vii-ix.
[56] *Letters of Sir Charles Bell*, p. 261, pp. 391-392.
[57] *Letters of Sir Charles Bell*, pp.391-392.

defer them.'[58] He was referring to the pain inflicted on the dogs involved in these experiments.

Bell also informed George that he 'had a most miserable time … from the failure of an operation, and the death of a worthy man. I shall regret it as long as I live. It is very hard, more trying than anything that any other profession can bring a man to do.' In a subsequent letter he wrote that, 'I must do an operation tomorrow, which makes me to-day quite miserable, … I am providing for a relay and continual supply of suffering.' In another letter he wrote, 'I have had operations both at the hospital and in private, from which I suffer indescribable anxiety; an operating surgeon's life has no equivalent reward in this world; and some from coarseness, want of feeling, and stupidity, deserve in the next … !'. Even the thought of having to operate when on call for his hospital caused him distress. His wife Marion remarked in her *Recollections*, that 'his attendance at the Middlesex Hospital for twenty-four years, was regular and unceasing. He was alert to every call there, yet nobody suffered more than he from a disturbed night.'[59]

A few days after Charles Bell returned to London from Waterloo, he wrote a letter to his friend and Whig MP Frances Horner (1778-1817), in which he displayed what Reddy referred to as 'self-exploring and self-altering effects', by recalling his wartime experiences through his emotional expressions. He described that he was now 'engaged in my usual occupation, and constantly disenchanted of the horrors of the battle of Waterloo.'[60] Referring to his experiences in Belgium, he wrote that it was impossible for him 'to convey to you the picture of human misery continually before his eyes.'[61] He described how he operated from 6 am to 7 pm and that during this time:

> all the decencies of performing surgical operations were soon neglected, while I amputated one man's thigh, there lay at one time thirteen, all beseeching to be taken next; one full of entreaty, one calling upon me to remember my promise to take him, another execrating.[62]

He recalled that despite this unfamiliar environment, the lack of decencies when performing surgery in war and the emotional demands placed upon him, he found it extraordinary that his mind was 'calm amidst such variety of suffering.'[63] He also explained

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[58] *Letters of Sir Charles Bell,* p.275, p.281, p.285, p.294, p.346.
[59] *Letters of Sir Charles Bell*, p.410.
[60] L. Horner, ed., 'Memoirs and Correspondence of Francis Horner, M.P.', 2 vols, John Murray, London, 1843, pp.267-269, https://books.google.co.nz/books/about/Memoirs_and_Correspondence_of_Francis_Ho. Accessed November 2020.
[61] Horner, ed., 'Memoirs and Correspondence of Francis Horner, M.P.', II, pp.267-269.
[62] Horner, ed., 'Memoirs and Correspondence of Francis Horner, M. P.', II, pp.267-269.
[63] Horner, ed., 'Memoirs and Correspondence of Francis Horner, M. P.', II, pp.267-269.

that to 'give one of these objects access to your feelings was to allow yourself to be unmanned for the performance of a duty, … [and that] it was less painful to look upon the whole, than to contemplate one object.'[64]

One hundred years later, the New Zealand surgeon Campbell Begg (1886-1971) expressed his similar feelings and the need for objectivity from a battlefield in WWI:

> hour by hour through the long day the endless procession of the maimed continued … sentiment had to be firmly suppressed: we were there to put the human machine right if we could without thinking too much of the suffering and sorrows of the man within. Only with this objectivity could we bear the burden of the day.[65]

Cooper described how after spending eight days working amongst the wounded, he visited the field of the Waterloo battle and heard stories of gallantry and individual instances of enterprise and valour which he said recalled him 'to the sense the world has of victory and Waterloo.' But for him, this 'gloomy uncomfortable view of human nature is looking upon the whole as I did – as I was forced to do.' He thought it was a misfortune that his sentiments were 'so at variance with the universal sentiment, … but there must ever be associated with the honours of Waterloo, to my eyes, the most shocking signs of woe, … [and] the dying and noisome smells.'[66] Cooper offered to show Horner the notebooks and sketches he had made at Waterloo in order to 'convey an excuse for this excess of sentiment.'[67] He acknowledged that his sentiments about Waterloo were different from others at a time when 'to Britain Waterloo meant victory and glory.'[68] As Peter Stanley has pointed out, 'the experience affected Charles Bell deeply, one of the few surgeons to acknowledge the trauma he suffered.'[69]

The emotions and feelings of some 'battle hardened' military surgeons can be gleaned from their war correspondence. One example cited by Brown was the letters written by Donald Finlayson who was an assistant surgeon and had seen action in various battles up to and including Waterloo. Finlayson's celebration of victory was tempered by his reflection on the personal and emotional costs of war. He wrote that he had seen 'war and its effects, and the actions it exerts on the physical and the moral constitution of man', … [how] the Nation must lament her loss, but rejoice at the event, … what misery war causes, … I could tell a

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[64] Horner, ed., 'Memoirs and Correspondence of Francis Horner, M. P.', II, pp.267-269.
[65] R. Campbell-Begg, *Surgery on Trestles: A Saga of Suffering and Triumph*, Jarrold & Sons, Norwich, 1967, p. 125.
[66] Horner, ed., 'Memoirs and Correspondence of Francis Horner, M. P.', II, pp.267-269.
[67] Horner, ed., 'Memoirs and Correspondence of Francis Horner, M. P.', II, pp.267-269.
[68] Stanley, *For Fear of Pain*, p.120.
[69] Stanley, *For Fear of* Pain, p.120.

tale of horror to cause the hardest heart … but let a veil be drawn over the perversion of mankind.'[70] There certainly was no celebration of war by these 'flesh-witnessing' surgeons, some of whom wished a veil to be drawn to help release them from their emotionally disturbing experiences.

Peter Stanley cited how the Edinburgh surgeon James Millar whom he described as 'the most reflective surgeon of his era', posed the question as to why was it that his colleagues 'grew pale, and sickened, and even fell in witnessing operations', and considered this was 'not from the mere sight of blood or of wound; but from the manifestations of pain and agony emitted by the patient.'[71] The famous French military surgeon Dominique-Jean Larrey showed compassionate feelings for wounded soldiers and the pain and suffering they endured. Rey cited the following comments Larrey made after the 1807 battle of Eylau against the Russian army in East Prussia:

> never has a day been as awful as this one; never has my soul been so moved; it was impossible for me to hold back my tears during those very moments when I was trying to bolster the courage of the wounded.[72]

A review of the writings, private correspondence and anecdotes of these surgeons demonstrates that their emotional sensations were all-embracing, and that how these were aroused, felt, expressed, and restrained, influenced by the different challenges presented in civilian and war surgery, their individual personalities, and the cultural norms or rules for feelings and behaviour within their profession or group. One is led to ask why, particularly in peacetime, these men choose surgical careers given the disturbing feelings and emotions they described. Perhaps in the words of some of those involved, they were driven by their desire to treat or possibly cure an ailment which caused great suffering.

Common emotional themes from the material analysed were anxieties, sickness, loss of sleep, disdain and oppressive feelings before surgery had begun. Once the procedures commenced, these surgeons felt calm, and displayed self-control, and emotional restraint. Charles Bell's writings and letters are unique in that they provide an insight into the emotions of a surgeon practising surgery in civilian practice and in war. Bell could well be described as a 'Romantic era' surgeon with his sentimentalism and willingness to share his emotions. Although some of his sentimentalism may have been innate, the contemporary culture of the

[70] Brown, 'Wounds and Wonder', pp, 230-259; National Library of Scotland, MS 9326, Thompson family collection, folio 45, 46, 47.
[71] Stanley, *For Fear of* Pain', p.219; J. Miller, *Surgical Experience with Chloroform,* p. 30.
[72] Rey, *The History of Pain*, pp.138-139; D. Larrey, *Memoires de Chirurgie Militaire et Campagnes*, J. Smith and F. Buisson, Paris, 1812-17, 4 vols, T 111 (1812), p.42.

Romantic era may have encouraged him to share his feelings, examples of which are portrayed in his letters and paintings.

His descriptions of his disturbing experiences at Waterloo and how these continued to affect him after he returned to London, demonstrate what Reddy referred to as a 'self-exploration' of emotional experiences and a 'self-altering' response which helped to shape Cooper's subsequent identity. Although he recognised and had some misgivings about how differently he perceived Waterloo to many others in Britain, his personal and up-close experiences solidified his views. The writings of military surgeons similarly showed how their experiences and emotions during war shaped the identities of some of those involved.

The personal emotions of the surgeons whom I have reviewed portrays them as 'men of feelings' and somewhat different to those in the images represented in satire, caricature and writings in the late eighteenth and early nineteenth centuries.

Coping with the pain and suffering in surgical patients

What was it that allowed or enabled these surgeons to perform surgical procedures knowing the anxiety, pain and suffering they were inflicting on their patients? One explanation popular in the first part of the nineteenth century was thought to be found in phrenology. The pseudoscience of phrenology was introduced in the 1790s by Franz Joseph Gall who suggested that certain characteristics were localised in particular parts of the brain and could be diagnosed by palpation for overlying bumps on the skull.[73]

Joanna Bourke noted that phrenologists speculated that the bump of the 'Organ of Destructiveness' which they located on the skull above the ear, and the bump of the 'Organ of Fighting' behind and above the ear, were 'crucial in predisposing men and women to physical stoicism.'[74] Phrenologist Robert Wells stated in his 1878 book on phrenology that a person with a prominent Organ of Destructiveness 'delights in causing pain', and when this organ is large, the person 'could assist in cutting off an arm or leg without faltering.'[75] Another phrenologist Samuel Wells wrote in his 1891 textbook on phrenology that a person with a 'very large' Organ of Destructiveness 'can, … if need be, inflict it [pain] upon others without compunction if not with positive pleasure', and agreed with Robert Wells that if it is

[73] D. Simpson, 'Phrenology and the Neurosciences: Contributions of F, Gall and J. Spurzheim', *Australia and New Zealand Journal of Surgery,* 75, (2005), pp.475-482.
[74] Bourke, *The Story of* Pain, pp.201-202.
[75] R. Wells, *A New Illustrated Hand-Book of Phrenology, Physiology and Physiognomy*, H. Vickers, London, 1878, p.154, p.156, http://archive.org>details>newillustratedha00well, accessed 2018-2020.

'large', the person 'could assist in taking off an arm or a leg without faltering.'[76] Bourke interpreted these statements from phrenologists as inferring that, 'a large Organ of Destructiveness was useful for surgeons because it enabled them to inflict pain.'[77]

Bourke cited the statements made by Sizer and Drayton in their 1886 book *Heads and Faces and How to Study Them*. I have chosen to include a lengthy excerpt from the authors' description of those with 'ample development' of the Organ of Destructiveness as it provides an interesting insight into their thinking. They regarded those with these characteristics as liking:

> to use the hammer and the axe and do their works by means of blows, … it gives them unflinching power to carry forward the discharge of duty, even though it may give temporary pain to ourselves or others. The surgeon needs it strongly marked though he may have Benevolence to make him pity the sufferer, he needs a stiff muscle and a firm resolve to use the knife effectively.[78]

These various statements which infer or state directly that surgeons have or require well developed Organs of Destructiveness reflect the degree to which phrenologists had extended their pseudoscience. Although the traits described were no doubt exhibited by some surgeons, this was purely by chance. By 1860 phrenology was largely discredited although handbooks on its use remained for many years. Clearly, this was not a likely explanation for surgeons' ability to cope with inflicting pain during surgery.

One approach to enable surgeons perform surgery was to try and equip those in training with the skills to cope with the emotional strains placed which would soon be placed upon them when performing painful operations and the changing of wound dressings. Students' exposure to dead bodies and the act of dissecting a cadaver were considered not only part of equipping aspiring surgeons with the anatomical knowledge necessary to perform surgery, but also to increase their resilience in preparation for the emotional strains that lay ahead. Surgical teachers also believed that acquaintance with the offensive smells and the plight of sick and suffering patients on hospital wards and observing operations on awake patients would 'harden' these students. Linda Payne quoted the Parisian anatomist

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[76] R. Wells, *How to Read Character: A New Illustrated Hand-Book of Phrenology and Physiognomy for Students and Examiners, with a Descriptive Chart*, Fowler and Wells, New York, 1891, pp.165-166, http://archive.org>details>howtoreadcharwell, accessed 2018-2020.
[77] Bourke, *The Story of* Pain, p.236.
[78] Bourke, *The Story of* Pain, p.237; N. Sizer, H. Drayton, *Heads and Face and How to Study Them; A Manual of Phrenology and Physiognomy for the People*, Fowler and Wells. Co, New York, 1886, p.69, http://archive.org>stream>headsandfacesan01draygoog_djvu, accessed 2018-2020.

Joseph Duverney (1648–1730) who in his course on surgery, offered the following advice his students and which one of them Patrick Mitchell (c.1671–1750) recorded:

> by seeing and practicing [on dead bodies] we accustom ourselves to the bad smell of ulcers etc, we lose foolish tenderness, so we can hear them cry, without any disorder, see haemorrhages, and other accidents, after the same manner; in order to the better performing of operations, it is necessary to work on dead bodys [sic] … .[79]

Similarly, William Hunter advised his students at the commencement of their anatomy course that:

> anatomy is the very basis of surgery everybody allows. It is dissection alone that can teach us, where we may cut the living body, with freedom and dispatch; and where we may venture with great circumspection and delicacy; and where we must not upon any account, attempt it. This informs the head, gives dexterity to the hand, and familiarises the heart with a sort of necessary humanity, the use of cutting-instruments upon our fellow-creatures.[80]

Hunter was explaining that cadaver dissection would provide the trainee with the necessary knowledge of anatomy, technical skills, and emotional resilience to perform surgery safely. Similarly, the London surgeon William Lawrence told his surgical students to 'prepare yourselves for operating on the living by cutting the dead.'[81]

When the demand for human bodies for dissection exceeded availability through legal means, the graves of the recently buried were opened and corpses snatched to supply these needs as described in Chapter 2. Although this was carried out predominantly by gangs of 'resurrectionists', medical students also participated in this bodysnatching through their desire to procure bodies to dissect, or through pressure from their surgical teachers or for financial gain.[82] Some teachers told the students that the act of procuring bodies would contribute to their resilience.

Expectations were placed upon students not just by their teachers but also by their families to come to terms with the disturbing sights and smells encountered during their training. An example of these expectations is illustrated in the correspondence which took

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[79] Payne, *With Words and* Knives, *p*. 87; P. Mitchell, *Lecture Notes taken in Paris Mainly from the Lectures of Joseph Guichard Duverney at the Jardin du Roi from 1697-8,* Wellcome Library, London, MS, 6, f.134.
[80] W. Hunter, *Two Introductory Lectures, Delivered by Dr William Hunter, to his Last Course of Anatomical Lectures at the Theatre in Windmill Street; As They Were Left Corrected for the Press by Himself,* J. Johnson, London, 1784, p.67.
[81] Lawrence, 'Lectures on Surgery, pp.33-42.
[82] Payne, *With Words and Knives,* pp. 125 – 152; Richardson, *Death, Dissection and the Destitute,* p.37.

place between Hampton Weeks (1780–1855) and his family. Weeks was a surgeon-apothecary pupil at St Thomas's Hospital from 1801 to 1802. He became a Member of the Royal College of Surgeons of London in 1802 and subsequently practised as a surgeon-apothecary in Brighton.

In September 1801, Weeks wrote to his father Richard Weeks who was a surgeon-apothecary (1751–1823), about the amputation of a patient's leg that he had just observed. He wrote, 'I felt too great a tenderness for him, it was before dinner too, it was a shaking sight.'[83] Perhaps he was inferring that observing this operation put him off his food. His father replied to say that Hampton's brother Dick, (who was also a surgeon-apothecary):

> desires an explanation of the word tenderness in your letter, he has a strong inclination to think it is only another name for Sickness, fainting, etc., etc., … and hopes you was not carried out for a dead man, wishes you to take a bumper of brandy next time.[84]

Hampton was keen to reassure both his father and his brother that he was becoming accustomed to the spectacle of suffering patients. In his reply just five days later, he wrote:

> I felt a something indescribable as I have heard you say & took myself off just as they had taken hold of the Artery with the Tenaculum & immediately recovered, I wont do so again I think for I will pursue the means you recommend, I can dissect I know, & could have performed the operation myself.[85]

In this same letter he responded to an incident mentioned by his father about a person who had been killed in a horse-riding accident and who was constantly being talked about in the local community. Hampton wrote that, 'here it would be thought nothing of, I find I shall soon get callous to it all.'[86] In a further letter he stated, 'I have seen several operations since I wrote last & mind nothing about it, the more the poor devils cry ye. more I laugh with ye. rest of them.'[87] Two days later, he wrote again to say:

> as to fainting I have entirely done that away. I take no brandy nor anything else now, but ye. 4 or 5 last operations there has been 2, 3, 4, & more young fellows who are uncommonly sick obliged to leave the Theatre.[88]

[83] J. Ford, 'A Medical Student at St Thomas's Hospital, p.39.
[84] Ford, 'A Medical Student at St Thomas's Hospital, p.42.
[85] Ford, 'A Medical Student at St Thomas's Hospital, p.44.
[86] Ford, 'A Medical Student at St Thomas's Hospital, p.44.
[87] Ford, 'A Medical Student at St Thomas's Hospital, p.49.
[88] Ford, 'A Medical Student at St Thomas's Hospital, p.51.

These letters demonstrate the external and personal expectations placed on surgical students to 'harden up' to the disturbing sights they observed during their surgical education and training. The correspondence of Hampton Weeks also illustrates how the students themselves bought into this requirement. What is even more surprising is the short time span in which this was said to have taken place if we are to accept his narrative was true. He explained how in the space of three weeks, he went from his early struggle to achieve dispassion, or having 'too great a tenderness' for the suffering of the patient, to where he speaks about being capable of doing the operation himself, becoming callous, laughing at the crying suffering patient and being proud that he no longer faints or is sick like 'young fellows'. Whether it was possible to achieve such a major transformation in his sensibility and emotions in three weeks is debatable.

Other stories recorded about surgical students in the early part of the nineteenth century, included examples of those who were unable to overcome the emotional distress they experienced while observing surgical procedures. During his stay as a medical student at the University of Edinburgh in 1825 and 1826, the English naturalist, biologist, geologist, and evolutionist Charles Darwin (1809–1882) observed surgical operations. In his autobiography Darwin wrote:

> I attended on two separate occasions the operating theatre in the hospital at Edinburgh, and saw two very bad operations, one on a child but I rushed away before they were completed. Nor did I ever attend again, for hardly any inducement would have been strong enough to make me do so; this been long before the blessed days of chloroform. The two cases haunted me for many a long year.[89]

Similarly, when James Simpson (1811-1870) was a 'surgeon's dresser' in Edinburgh, he observed the suffering of a poor Highland woman as she underwent amputation of her breast. He became so upset by the ordeal that he left the operating theatre and went directly to Parliament House to seek work as a writer's clerk. Fortunately for society, this compassionate man had second thoughts and returned to study medicine, asking, 'can anything be done to make operations less painful?' leading later to his discovery of chloroform.[90] The London surgeon Samuel Cooper described another surgeon in training who was so disturbed by the pain caused by surgery that he had to abandon his plans to enter surgical practice.[91]

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[89] F. Darwin, ed., *The Autobiography of Charles Darwin, From the Life and Letters of Charles Darwin*, By Charles Darwin. 3 vols, John Murray, London, 1887, p.37.
[90] Duns, *Memoir of Sir James Y, Simpson, Bart,* pp.26-27, https://books.google,ne>books, accessed 2017-2020.
[91] S. Cooper, *A Dictionary of Practical Surgery: Comprehending All the Most Interesting Improvements from Earliest Times Down to The Present Period*, Collins & Hannay, New York, 1823, II, p.443.

The ongoing changes in philosophical and religious values in Britain before and during the period of my study influenced the attitudes and mindset of the surgeons just as it did the wider public. By the middle of the seventeenth century, the philosophy of Epicureanism with its emphasis on pleasure and tranquillity and achieved by avoiding extremes of passion and distress, experienced a revival in England.[92] This was following by the revival of stoicism during the Renaissance, which stressed reason and self-control with the stoic person expected to be dispassionate or pitiless. Payne has explained that in stoicism:

> pity was regarded as a useless emotion; it simply made the onlooker feel as wretched and pathetic as the sufferer. This was considered irrational, and so the Stoic sought to control his emotions and not be distressed by other's pain.[93]

This philosophy of Anglicanism which was then the predominant religious denomination in England, emphasized self-control and fortitude. But this began to change in the second half of the eighteenth century when Hume's moral sense theory and Gregory's recognition of the importance of sympathy in medical practice became more widely accepted and contemporary surgeons sought to incorporate these philosophies into their encounters with patients. By then their attitudes had begun to draw on the prevailing 'sentimental romanticism of the literature and the arts, and the benevolent humanitarianism of social reformers, [enabling] a new approach to suffering.'[94] The evolution of these developments and the writings, teachings and example of those surgeons who embraced these sentiments helped to influence changes in surgeons and in the ways in which they carried out their surgical practice. Between the end of the eighteenth and the middle of the nineteenth century, surgeons' desires to be recognised by the public as gentlemen and men of science with sensibility and benevolence was beginning to be realised.

In summary, historians such as Lynda Payne have highlighted dispassion as the primary emotional state of surgeons in the late eighteenth century. She has suggested this state of inhumanity resulted predominantly from their experiences as students through undertaking cadaver dissections and observing the pain and suffering of patients undergoing operations. However, the effects of watching or carrying out surgery took its toll and for many, learning to inflict pain was the most challenging part of their education and training, as alluded to by Pernick.[95] It is likely that for those students who were seeking a career as 'pure surgeons', the time they spent in the dissecting room, on the wards and in the operating theatre would have helped them in their career choice and preparation. The majority

[92] Payne, *With Words and Knives,* p.42.
[93] Payne, *With Words and Knives,* p.68.
[94] Pernick, *The Calculus of Suffering in Nineteenth-Century Surgery,* p.26.
[95] Pernick, *The Calculus of Suffering in Nineteenth-Century Surgery,* p.27.

however were destined to practise as surgeon-apothecaries like the Weeks family, and although the number of operations they would perform would be few, their letters confirm how they sought surgical experience in the hospitals before entering practice.

Learning and maintaining humane dispassion in surgery was not an easy task for some students. Hampton Weeks may have claimed to have got over his initial distress about patients' suffering within three weeks, but this seems unlikely and perhaps reflects a desire to conform to peer pressure and the expectations of his family. The stories about other students who were unable to cope with what they observed particularly in the operating theatre, presents a different view to that expressed by Lynda Payne. Furthermore, the feelings expressed by those who practised surgery confirms that those 'who made it', continued to be affected by their own emotions during their patient's suffering.

Methods used by surgeons to avoid or reduce pain in their patients

Prior to the advent of inhalation anaesthesia and painless surgery, surgeons made various attempts to avoid or mitigate the pain caused by surgical procedures. Available methods were limited to reducing the sensibility of the whole body or a part such as a limb, or by modifying their surgical techniques. One approach was to reduce the sensibility of the body through the use alcohol or anodynes. As mentioned in Chapter 5, Fanny Burney was given a wine cordial prior to her surgery. However, there is little evidence to show alcohol was widely used in civilian surgical practice to reduce pain. It was however commonly employed in the armed forces to fortify and enable men to bear the ordeal of major surgery as occurred in the case of Thomas Jackson.[96] He was given a pint of wine which 'wrought a wonderful effect and raised up my spirits to an invincible courage' during his leg amputation.[97]

Henry Fearon acknowledged the distress that cancer could cause a patient. In his compassionate response, Fearon wrote:

> whatever tends to mitigate the pangs of our fellow creatures, unremittingly tortured with this dreadful disease, cannot be thought unworthy of public attention: and if not only to mitigate their sufferings, but to remove them entirely, can by experience be proved practicable, by the operator.[98]

James Moore (1763-1834) was a Scottish surgeon and writer who studied medicine in Edinburgh and London. He became a Member of the Company of Surgeons, spent time as an army surgeon and later practiced surgery in London. In his 1784 monograph he

[96] Stanley, *For Fear of Pain,* pp.285-286.
[97] Jackson, *Narrative of the Eventful Life of Thomas* Jackson, p.77.
[98] Feardon, *A Treatise on Cancers with a New and Successful Method of Operating*, 3rd ed, p. v.

described giving patients anodynes such as opium internally before their surgery. He added that, the 'strongest dose we dare venture to give, has little or no effect in mitigating the suffering of the patient during operation.'[99] He considered a moderate dose of opium after the operation was completed, as highly expedient to lessen the pain in the wound and to induce sleep.[100]

Moore advocated for the avoidance of the cautery and the selection of certain surgical instruments which might cause less pain. However, he added that even after every improvement was made on the instruments and in the manner of operating, pain remained. He described a technique he invented which involved applying pressure to specific nerves using a metal device. He provided examples of the successful use of this apparatus in his own practice and one account of testing it on a patient at St George's Hospital who had his leg amputated by the surgeon John Hunter. When questioned after the operation, this patient was said to have declared that he had hardly felt any pain.[101]

The Scottish surgeon Benjamin Bell (1774-1806) was trained in Edinburgh and became a Fellow of the Royal College of Surgeons of Edinburgh and a founding Fellow of the Royal Society of Edinburgh. He was a popular surgeon and author and published his widely read book *A System of Surgery* in seven volumes between 1783 and 1801. He reiterated many of Moore's observations and added that large doses of opium were apt to induce sickness and vomiting and therefore more useful if given after, rather than before or during surgery.[102] Morphine was derived from opium in 1803 and later largely replaced it.

Modifications in surgical techniques to reduce or avoid pain, included taking great care not to damage nerves when using setons, the avoidance of cautery or caustics, and closing wounds with adhesive strips rather than with sutures. Surgeons operated faster where possible to minimise the time patients were exposed to the pain of surgery. The greatest exponent of rapid surgery was the dextrous Scottish surgeon Robert Liston (1794-1847) who had been educated in Edinburgh and practised there before moving to London where he was professor of surgery at University College Hospital. In 1837 Liston wrote: 'the infliction of unnecessary pain through want of adroitness in the use of instruments, [and] by protracting of any proceedings … is in point of fact highly criminal.'[103] Apart from these examples of medications and surgical techniques, it was the expected practice for surgeon to comfort the

[99] J. Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery,* p.13.
[100] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery,* p.13.
[101] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, pp.30-33.
[102] B. Bell, *A System of Surgery,* T. Cadell & W. Davies, Edinburgh, 1801, I. pp.437-38, https://archives.org.details./b21288148. Accessed 13 December 2017.
[103] R. Liston, *Practical Surgery*, John Churchill, London, 1837, p.4.

patient and this was recommended by Thomas Percival in Code XXIII of Chapter I of his *Medical Ethics,* as I discussed in Chapter 4.

A novel method used by some surgeons to reduce pain was mesmerism or an early form of hypnosis.[104] This was introduced in the 1790s by the German doctor Anton Mesmer (1734-1815) and which Stanley noted, 'offered the most important and first viable alternative to painful surgery.'[105] Despite demonstrations showing that it was possible to carry out painless surgery using this technique, its proponents and in particular the London physician John Elliotson (1791-1868), failed to convince a doubtful medical profession. In 1843, Elliotson described a number of cases including the 'successful amputation of a leg during the mesmeric state, without the knowledge of the patient … and was voted thanks for it without a dissentient voice.'[106] However, Elliotson's public demonstrations of mesmerism using the O'Key sisters eventually led to major scepticism. Following one such demonstration at the home of Thomas Wakley (editor of the *Lancet*), and during which he carried out his own observations and covert experiments, Wakley described his findings and his gross scepticism in two *Lancet* editorials, both of which were highly critical and left mesmerism in disrepute.[107] Although mesmerism failed to gain wide support, it opened the minds of surgeons to the possibility of operating without inflicting pain.

The final death knell for the use of mesmerism by surgeons in Britain occurred in December 1846 following the painless amputation of a patient's leg under ether anaesthesia by Robert Liston.[108] In a collection of essays written by the London physician Sir John Russell Reynolds (1828-1896) and published by his widow in 1896, Reynolds recalled the details of the events he observed that day as a student in the operating theatre at the University College Hospital. He recounted how Liston announced to his students, 'Gentlemen, we are going to try a Yankee dodge for making men insensible.' William Squire, [and not his uncle Peter as mentioned by Reynolds] who was then a medical student administered ether to a male patient.[109] Liston amputated the leg in 'six-and-twenty seconds'. He then turned to those present and said, 'this Yankee dodge, gentlemen, beats

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[104] Stanley, *For Fear of Pain*, pp.288-294.
[105] Stanley, *For Fear of Pain*, p.208.
[106] J. Elliotson, *Numerous Cases of Surgical Operations Without Pain in the Mesmeric State; With Remarks upon the Opposition of Many Members of the Royal Medical and Chirurgical Society and Others to the Reception of The Inestimable Blessings of Mesmerism,* Lea and Blanchard, Philadelphia, 1843, pp.2-7.
[107] 'Animal Magnetism', The *Lancet,* 2 (1837-1838), pp.834-836; 'Faculties of Elizabeth O'Key', *The Lancet*, 2 (1837-1838), pp.873-877.
[108] C. Massey Dawkins, *The First Public Operation Carried out Under an Anaesthetic in Europe*, Anaesthesia, 2, 2 (1947), pp.51-61.
[109] W. Squire, 'The First Operation Under Ether in Great Britain', *British Medical Journal,* 2, 1868 (1896), pp. 1142-1143.

'Mesmerism' hollow!'[110] Such was the fame of Liston that news of his success with ether spread widely and led to the demise of mesmerism.

Desirable attributes of surgeons

Historical descriptions of the ideal attributes of a surgeon were traditionally based on those first defined by the Roman encyclopaedist Aulus Cornelius Celsus (c. 25 BC - c. 50 AD). Several different translations of the original description by Celsus exist, and the following version by the French surgeon Ambroise Paré (1510.c. -1590) is frequently quoted:

> a Chirurgeon must have a strong, stable, and intrepid hand, and a mind resolute and merciless; so that to heal him he taketh in hand, he be not moved to make more haste than the thing requires; or to cut less than is needful; but which doth all things as if he were nothing affected with their cries; not giving heed to judgement of the vain common people, who speak ill of Chirurgeons because of their ignorance.[111]

Amongst the more recent translations is that which was first written in 1953 and recently cited by Payne. This translation commences with the words 'a surgeon should be filled with pity.'[112] The recommendation by Celsus to show pity and yet remain steady and focused on the operation and not affected by the patient's cries would have been a tough assignment for surgeons-in-training. Nonetheless his advice was taught for generations.[113]

In his *Lectures on the Duties and Qualifications of a Physician*, John Gregory wrote in 1772 that what was necessary to make a good operator, was a 'resolute, collected mind, a good eye, and a steady hand', and he considered these talents could be 'united with those of an able physician, but they may also be separated from them.'[114] He explained that if surgery was to be 'confined to a set of men who were to be mere operators the art would be more quickly brought to perfection', as opposed to those who 'follow a more complicated business, and practise all the branches of medicine.'[115] Gregory was explaining here that if surgery was limited to technical proficiency it might be reached sooner, but as surgeons also required a knowledge of medicine, those who practised it would also benefit by many of the talents of a physician.

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[110] J. Reynolds, *Essays and Addresses,* Macmillan and Co., Limited, New York, 1898, pp.273-274.
[111] 'Of Chirurgical Operations', *The Workes of That Famous Chirurgeon Ambrose Parey*, R. Coates, W. Dugard, London, 1649, p.2. http://archive.org-details-workesofthatfamo00par, Accessed 22.08.2019.
[112] Payne, *With Words and Knives,* p.3, Aulus Cornelius Celsus, *'De re medicina*: Book Seven: *The Prooemium'*, in *Medical Works in Fascimile*, Pergamum Press, London, 1953, p.296.
[113] Payne, *With Words and Knives,* pp.3- 4.
[114] Gregory, *Lectures on the Duties and Qualifications of a Physician,* pp.48-49.
[115] Gregory, *Lectures on the Duties and Qualifications of a Physician*, pp.48-49.

One aspect of the history of the education and training of surgeons which has received limited attention relates to the recognition by contemporary surgeons of the importance of certain desirable attributes in those students who wished to embark on a surgical career. Some of this was driven by their wish to raise the standards of behaviour and the art of surgery, but a separate reason may have been the criticisms of existing surgeons by members of the public. Although several surgical leaders were determined that students as well as those entering independent surgical practice should be aware of and demonstrate the importance of humanity and sympathy in all encounters with patients, this did not necessarily always eventuate, as the following report by William Nolan suggests.

With the establishment of voluntary hospitals or infirmaries in the mid-eighteenth century, surgeons and physicians were appointed to the much sought-after positions at these institutions. Notwithstanding my earlier comments about appointments to the major London hospitals, historian Susan Lawrence has shown that more generally, when hospital governors chose a surgeon or physician for one of these positions, they 'picked a man who represented the charity's major purpose, the cure of the deserving poor, through his orders about care and medications or his performance of operations.'[116] However, the attitudes and sensibility of some medical and nursing staff towards those admitted to these hospitals were alleged to be at odds with these expectations. Londoner William Nolan, whose identity or occupation has eluded an extensive search by Susan Lawrence as well as my own, was appalled by what he discovered in the hospitals he visited.[117] Nolan published his observations and recommendations in his report published 1786. In this report he described:

> the wanton abuse which is known but to generally to prevail in [these] god-like institutions - where avarice and insensibility in the officers and servants (not to say neglect in the physicians and surgeons) frequently prevent the unhappy patients from receiving the consolation in them that, the nature of their malady demands.[118]

Nolan outlined how those, 'eminent in their profession, use exceedingly harsh language and apparently unfeeling treatment to their patients, when in most agitating mental anxiety, and under the most excruciating corporal pain.'[119] He labelled this behaviour as 'a conduct which is by no means reconcilable to the dignity of the gentlemen, the sensibility of the man, or the profession of surgery.'[120] He reprimanded the surgeons for their eagerness

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[116] S. Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth-Century London*, Cambridge University Press, Cambridge, New York, 1996, p.71, and footnote number 110.
[117] Lawrence, *Charitable Knowledge,* p.56.
[118] W. Nolan, *An Essay on Humanity or a View of Abuses in Hospitals with a Plan for Correcting them*, J Murray, London, 1786, p.10, http://books.google.com. Accessed 2019-2020.
[119] Nolan, *An Essay on Humanity or a View of Abuses in Hospitals with a Plan for Correcting Them*, p.24.
[120] Nolan, *An Essay on Humanity or a View of Abuses in Hospitals with a Plan for Correcting Them*, p.24.

and haste to amputate a limb, and for their failure to seek the opinion of colleagues and consider whether the possibility of an 'alternative means exists of effecting a cure, without having recourse to this desperate alternative.' [121]

In his comments regarding those training to be surgeons, Nolan regretted 'that at present, the majority of young gentlemen who walk our different hospitals are very little under the dominion of the humane power of sympathy.' He considered 'the frequency of operations and amputations familiarizes them to such affecting sights', and that 'there is a professional necessity for surgeon's being divested of the feminine weakness of pity.' Furthermore, 'in desperate cases … courage is necessary to the performance of these hazardous undertakings; but this admission by no means implies, that insensibility is a necessary qualification in the constitution of the surgeon: the contrary, as has already been shown, is the case.'[122]

Regarding future surgeons, Nolan recommended that:

> for those young gentlemen to consider, that humanity will always stamp a dignity on the profession, which moroseness will rob it of; and that in their endeavours to become surgeons, they should never forget – they are men – and gentlemen – appellations, to which a perseverance in an unyielding conduct of this kind, will utterly exclude them from having the least pretentions.[123]

In these observations, Nolan criticised surgeons for their 'over eagerness' to operate and for their lack of the 'humane power of sympathy'. He rejected the notion that insensibility was a necessary qualification in the constitution of the surgeon, but that the contrary was true and that 'humanity will always stamp a dignity on the profession'. Historian David Turner who referred to Nolan in 2017 as hospital medicine's most powerful eighteenth-century critic, noted that his criticisms were 'fiercely refuted by those who claimed 'internal knowledge' of the hospital system' citing several important references.[124] However, Nolan

[121] Nolan, *An Essay on Humanity or a View of Abuses in Hospitals with a Plan for Correcting Them*, p.25.
[122] Nolan, *An Essay on Humanity or a View of Abuses in Hospitals with a Plan for Correcting Them*, pp.37-38.
[123] Nolan, *An Essay on Humanity or a View of Abuses in Hospitals with a Plan for Correcting Them,* p.38.
[124] D. Turner, 'Disability and Prosthesis in Eighteenth- and Early Nineteenth-Century England', in, M. Jackson, ed., *The Routledge History of Disease,* Routledge, London and New York, 2017, pp.305-306; *'Review of William Nolan, An Essay on Humanity',* Gentlemen's Magazine, 57, 3, March 1787, p.254; S. Laurence, *Charitable Knowledge*, pp. 71-72; *Rules and Orders Governing the Government and Conduct of the* House', in A. Clark, *A System Preached in the Cathedral Church of Winchester before the Governors of the County Hospital for Sick and Lame,* London, J. and J. Pemberton, 1737, p.47.

was not alone in his views. As discussed in Chapter 2, contemporary caricaturists and others did not portray surgeons favourably.[125]

The question which arises from the criticisms of surgeons by Nolan and others, is how the contemporary surgeons responded to this censure and what characteristics or attributes they considered were important in the ideal surgeon. The response of surgeons to the allegations of insensitivity was discussed in Chapter 2. In the following section, I will explore the attributes they considered were necessary.

In order to identify the attributes which surgeons considered important, a search was undertaken of surgical textbooks, published literature and collections of surgeons' writings. This review has identified comments made by several surgeons, each of whom was then recognised as an influential surgical leader. I will list the findings from my analysis in the chronological order the appeared in their relevant publications.

In the introduction to his 1784 monograph, James Moore wrote that:

> if any of the professions were … to be distinguished by the name of humane; we might naturally expect it would be that whole particular object it is, to relieve the suffering of humanity. And, if a greater degree of compassion and sympathy were looked for among a class of men than any other, we should expect to find it in the breasts of those who pass their lives in the duties of so benevolent a profession. Physicians, however, have been accused of a want of feeling for the distress of human nature, and surgeons of actual cruelty.[126]

Moore went on to observe that if these accusations were just, 'it would strike with more force at the art of medicine and surgery themselves, than at the individuals who profess them.'[127] He explained this was because 'it is impossible to imagine, that men of cruel dispositions would be attracted more than others to the study of arts, whose aim is the alleviation and removal of sickness and pain.'[128] Moore considered the reason 'must therefore be the exercise of those arts, which render physicians and surgeons unfeeling and cruel, and not an original unfeeling and cruel disposition, that directed them in their choice of those arts.'[129] He wrote 'that some surgeons are cruel, cannot be denied; and the reason is, because all men are not humane.'[130] By this he inferred that some men - but not all - were

[125] T. Rowlandson – *Amputation, 1793. Royal Collection*. Https://www.rct.ul-collection-amputation. Accessed 20.08.2019.
[126] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery,* pp.1-2.
[127] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, p.2.
[128] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, p.2.
[129] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, p.2.
[130] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, p.2.

heartless. He regarded as absurd the opinion entertained by some, that 'a certain degree of cruelty was requisite to enable a man to perform surgical operations with coolness and presence of mind.'[131] Moore like Nolan, rejected the idea that surgeons needed to be cruel and added that 'nothing … can be more certain than that humanity of disposition, when joined to knowledge and steadiness, tend to render a surgeon not only more agreeable, but more successful in practice.'[132]

Benjamin Bell wrote in his popular textbook of surgery *A System of Surgery* that the highest gratification for every practitioner was to be able 'to alleviate the misery of those who are obliged to submit to dangerous operations.' He added that because 'pain is the most dreadful part of every operation, it necessarily demands our most serious attention [to] be lessened in different ways.'[133]

Sir James Earle (1755-1817) was London surgeon, Master of the Company of Surgeons and later of the Royal College of Surgeons of London, Surgeon-Extraordinary to George III and a Fellow of the Royal Society. Earle acknowledged that surgeons' humane feelings must suffer during surgery but like James Moore and Benjamin Bell, he celebrated their ability to relieve the distress of the patient albeit through a painful procedure. In reflecting in 1790 on the changes in surgical practice during the previous forty years, Earle noted that surgery had become divested of many of its previous horrors and that:

> except on those unfortunate occasions, when the humane feelings of the practitioner must suffer, from the unavoidable necessity of giving pain, the aim and end of the healing art are surely pleasing. To possess the power as well as the inclination to relieve distress, to soften anguish, … must afford to every feeling mind, the greatest and most sincere pleasure which it is capable of enjoying.[134]

James Parkinson wrote of the importance of the personal attributes of students. Presumably referring to the bedside, Parkinson held that:

> a sympathetic concern, and a tender interest for the suffering of others, ought to characterise all those who engage themselves in a profession, the object of which should be to mitigate or remove, one great portion of the calamities to which humanity is subject.[135]

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[131] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, p.5.
[132] Moore, *A Method of Preventing or Diminishing Pain in Several Operations of Surgery*, p.7.
[133] B. Bell, *A System of Surgery*, p.437.
[134] J. Earle, *The Chirurgical Works of Percival Pott, to which is added "A Short Account of the Life of the Author"*, 3 vols, J. Johnson, London, 1790, I, pp. xi-xiii. http://archive.org/details/b21461818_ooi. Accessed 9. 08.2019.
[135] Parkinson, *The Hospital pupil,* p.11.

He went on to write that a person 'who can view the sufferings of a fellow-creature with unconcern, will, there is too much reason to fear sometimes neglect the opportunities of administering the required relief.'[136] Parkinson believed that a person without the attributes of compassion and sympathy for the suffering of others should not engage themselves in the medical profession.

In his monograph on the education and training of surgeons published in 1800, James Lucas highlighted the overriding importance of the attribute of humanity in a surgeon. He described humanity as:

> a fountain, from which so many good qualities spring, that it is generally mentioned, as the most acceptable and approved part of the character, … [and] when practice is unmingled with sympathy, ignorance and mercenary views are generally the cause.[137]

Lucas stated that the characteristics requisite for a surgeon-apothecary were 'method, affability, sobriety, humanity, resolution, integrity, and zeal in professional concerns, … [with] humanity generally mentioned as the most acceptable and approved part of the character.'[138] He added that 'humanity teaches us to consider every distressed object, as a relative, and to show him equal compassion.'[139] This was a similar comment to that made by John Gregory as was discussed in Chapter 3.

These sentiments were further emphasised in 1801 by the surgeon John Bell, who wrote that the duties of humanity and diligence were to be prized in a surgeon, and that 'mercy and tenderness towards his patients, and every kind of charity, are the chief virtues and most becoming ornaments of a surgeon.'[140] In the advertising material for his textbook *The Principles of Surgery* published in 1801, Bell wrote that he published this book, 'to teach young men to practise their profession with humanity, zeal and charity'. He expanded on this theme in the introductory chapter, where he described the contemporary weaknesses in the practice of surgery as over-operating, poor technical skills, and pride in hastiness, excessive boldness and dexterity.[141] Bell added, 'those qualities which relate to operations and other public exhibitions of skill, are of doubtful kind, while the duties of humanity and diligence are far more to be prized; they are both amiable and more useful'.[142] John's brother Charles

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[136] Parkinson, *The Hospital pupil,* p.11.
[137] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.99.
[138] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* pp.93-98.
[139] Lucas, *A Candid Inquiry into the Education, Qualifications and Offices of a Surgeon-Apothecary,* p.99.
[140] J. Bell, *The Principles of Surgery,* T. Cadell & W. Davies, Edinburgh, 1801, I. pp.12-14, https://archives.org.details./b21288148. Accessed 13-20 December 2017.
[141] Bell, *The Principles of Surgery*, I. pp.1-15.
[142] Bell, *The Principles of Surgery*, I, p.12.

voiced similar concerns about the state of surgery at the commencement of the nineteenth century in his 1805 letter to their other brother George. He stated:

> I am just returned from witnessing an operation, … I cannot bring my mind to leave surgery in the state it is now practiced, … yet, being bound by certain rules, a spectator merely, it was torture to me.[143]

Although progress was being made in the professionalization of surgery, it is evident there was some way to go before this would be achieved. John Bell lauded the French surgeon Paré (1510-1590) for his humility, and for his charitable and affectionate attitudes towards the poor. Bell rejected displays of personal and showy accomplishments by surgeons and added that, 'mercy and tenderness towards his patients, and every kind of charity are the chief virtues and most becoming ornaments of a surgeon.'[144] He summarised the attributes of an ideal surgeon in his recommendation that the surgeon, 'must be everything to the patient; watchful, friendly, compassionate, cheerful; for the patient lives upon his great looks; it is when his surgeon becomes careless, or seems to forsake him, that he falls into despair.'[145]

These comments by Parkinson, Lucas, Bell, and others seem at first glance to be somewhat at variance with the observation made in 1983 by historian Martin Pernick. In reflecting on the training of surgeons in the early nineteenth century, Pernick wrote that 'the emotional ability to inflict huge suffering was a prerequisite for those wishing to consider surgery as a career.'[146] Pernick was simply acknowledging that resilience and fortitude were necessary attributes for surgeons in training and did not infer this precluded the other important attributes just listed.

Charles Bell was known as a surgeon with compassion and for his reticence in causing pain to his patients or to the animals on which he reluctantly performed his famous neurological experiments. In a letter to his brother George written in 1809, he highlighted the importance of his personal attributes of care and compassion in the recruitment of private patients. He wrote: 'my patients are now of a proper class, … they come from my character, and are retained by finding relief, by being treated with attention and kindness.'[147] He was also concerned about patients being offered unnecessary surgery and particularly so by young and inexperienced surgeons. He noted, 'there is a limit to his [surgeon's] boldness and ingenuity in operating on the living body, [adding] surgeons of experience refuse to do

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[143] *Letters of Sir Charles Bell*, p.40.
[144] Bell, *The Principles of Surgery*, I, p.14.
[145] Bell, *The Principles of Surgery*, I, p.15.
[146] Pernick, 'The Calculus of Suffering in Nineteenth-Century Surgery', pp.26-36.
[147] *Letters of Sir Charles Bell,* p.159.

those feats which they were eager to perform in their younger days.'[148] This remains a truism to this day.

Despite his notoriously brusque manner, John Abernethy was one of the most celebrated surgeons of his day. In explaining how he ensured patients would listen to advice, he said, 'in short, there are but two holds you have over any person's mind – those are fear and hope; and I make use of them both with my patients.'[149] He told his students that, 'operations should never be induced but in cases of absolute necessity. A surgeon should never approach a victim for an operation but with humiliation – it is a reflection upon the healing art.'[150] In regard to amputations, Abernethy explained that 'no surgeon has a right to lop off any part of a man's body but for the preservation of life; it is your duty to give him a chance of doing well.'[151] This may have reflected his dislike for operating as discussed earlier, or perhaps his support for the growing importance of conservative surgery.

Sir Benjamin Brodie (1783-1862) was a renowned English surgeon, anatomist and medical educationist who worked at St George's Hospital. He was influential in raising the standard of surgical education and training at the Royal College of Surgeons of England and elected as its President. He received many awards including election as a Fellow of the Royal Society and later its President, and a Doctor of Civil Law from the University of Oxford. He was the first President of the General Medical Council. He became Sergeant-Surgeon to William IV, and to Queen Victoria', who awarded him a Baronetcy.

In his introductory lecture to medical students delivered in 1820, Brodie spoke about the desirable attributes and qualifications of the surgeon. Amongst those he highlighted were, 'that strength of nerve, … presence of mind and readiness of conduct which is to fit him to operate with confidence and ease.'[152] He explained that 'although great surgical ability could make up for the lack of some social skills, it would not compensate for rude manners', and added that:

> a man whose manners are rude, and offensive can scarcely rise to any great eminence in his profession, because many would rather trust themselves to one whose manners gave them less disgust even tho' he possessed a somewhat smaller

[148] C. Bell, *Practical Essays*, Maclachlan, Stewart, & Company, Edinburgh, 1841, Essay I, p.1.
[149] J. Abernethy, *Lectures on Anatomy, Surgery and Pathology*, Benjamin Perkins, Boston, 1828, p.54.
[150] Abernethy, *The Surgical Works of John Abernethy,* Longman Hurst, London, 3 Vols, 1811 – 1814.
[151] Abernethy, *Lectures on Anatomy, Surgery and Pathology,* p.52.
[152] B. Brodie, *Introductory Lecture of Anatomy and Physiology,* October 1820, Royal College of Surgeons of England Library & Archives, MS0470/1/2/5, pp.1-24.

> portion of knowledge, … [and that a man whose] general conduct is licentious and dishonourable cannot be trusted as a surgeon, more than in any other capacity.[153]

Brodie shared with his students that complaints had been made 'against our profession, that being perpetually present at scenes of woe tends to blunt the feelings of our nature and to render us less capable of sympathising with the sufferings of others.'[154] He considered this criticism was unfounded and went on to explain that:

> while a surgeon does not sympathise with the bodily pain of his patient as an ordinary bystander would do, … this is not because he is deprived of feeling but because his mind is occupied by other considerations; because he is engaged in adopting means for his patient's relief.[155]

According to Brodie, the surgeon whose 'delicate sympathy made him shrink within himself at every stroke of his scalpel, would be ill fitted to perform an operation.'[156] Explaining this further he stated that a surgeon:

> should not be characterised as a man of superior sensibility but one whose zeal in the science of his profession and whose anxiety for his patient's welfare are sufficiently powerful to suspend for a while, feelings of less importance.[157]

At first glance, this laying aside of one's feelings appears to justify a sense of callousness during the operation or the acceptance of short-term pain to prevent or reduce long-term suffering. However, it does not necessarily imply that the surgeon's feelings are unimportant. Rather these must be held under control as part of what Nicholas Whitfield and Thomas Schlich described as 'emotional restraint', while at the same time showing sympathy and compassion for the patient's suffering.[158] These comments by Brodie were similar to those expressed by John Gregory fifty years earlier as discussed in Chapter 3. He reassured his students that the anxieties which were met within the practice of surgery were more than compensated for by the gratification of continually relieving the distress of others. Brodie also told his students that those 'who can look with indifference on the agonies of a fellow creature is not the person to practise surgery.'[159] His consistent message to surgeons-in-

[153] Brodie, *Introductory Lecture of Anatomy and Physiology*, MSO470/1/2/5, pp.1-24.
[154] Brodie, *Introductory Lecture of Anatomy and Physiology,* MS0470/1/2/5, pp.1-24.
[155] Brodie, *Introductory Lecture of Anatomy and Physiology,* MS0470/1/2/5, pp.1-24.
[156] Brodie, *Introductory Lecture of Anatomy and Physiology,* MS0470/1/2/5, pp.1-24.
[157] Brodie, *Introductory Lecture of Anatomy and Physiology,* MS0470/1/2/5, pp.1-24.
[158] Whitfield, Schlich, 'Editorial: Skills through History', p.352.
[159] Brodie, *Introductory Lecture of Anatomy and Physiology,* MS0470/1/2/.

training was the importance of strength of nerve, humanity, support for the patient, to which he added humility in 1843.[160]

In a further lecture delivered to surgical students in 1835, Brodie was outspoken about the possible impact of unsuccessful surgery not just on the patient but also on the public's perceptions of surgeons and surgery and gave examples from his own practice on how this might have been avoided. He explained that 'every failed operation prevents two or three patients from undergoing an operation in cases where it might be successful.'[161]

In a lecture to medical students in 1823, Sir Astley Cooper described the essential qualities required by a surgeon as:

> neatness in the application of his remedies, … gentleness of manner; patients having a natural dislike to operations, feel still more uneasy if they discover anything in their practitioner's behaviour that makes them apprehend rough treatment.[162]

The quality which he considered of the highest order was 'self-possession or the head must always direct the hand, … it inspires confidence, and almost ensures success of the operation', and would forward the interest of professional men as well as diminishing the sufferings of human nature.[163] The importance of self-possession, being calm and in control of one's emotions at all times, and willing to communicate fully with patients, is a recurrent finding in the writings of these surgeons. Cooper went on to explain how patients generally form an opinion of a surgeon's ability by his manner. If he is 'of a dry, morose turn, he is apt to alarm not only the patient, but his whole family'. If on the other hand 'he speaks kindly to them, and asks for particular information, [he] is supposed to have more knowledge, and receives more respect.'[164]

Cooper recognised the importance of the patient's medical history and explained to his students why they should never advise an operation unless it was likely to be successful. In his 1829 *Illustrations of the Disease of the Breast*, Cooper wrote that:

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[160] Brodie, *An Introductory Discourse on the Duties and Conduct of Medical Students and Practitioners*, Longman, Brown, Green and Longmans, London, 1843, p. 12. https://archive.org>details>b21472853, accessed June 2020.
[161] Brodie, 'St. George's Hospital Clinical Lecture on Epulis, with Remarks on Operations in General', *The Lancet,* 1, (1835-1836), p.281.
[162] Cooper, 'Surgical Lectures', *The Lancet,* 1, 3 (1823), pp.73-79.
[163] Cooper, 'Surgical Lectures', pp.73-79.
[164] Cooper, 'Surgical Lectures', pp.73-79.

> the grand object which we ought always have in view – to exercise our profession in the most scientific manner, and to do all in our power to diminish the evils and sufferings of humanity.[165]

This focus on the importance of a scientific approach in surgery was reiterated 1848 by John Vincent (1776-1852), the London surgeon and President of the Royal College of Surgeons of England, who wrote that:

> surgeons have a duty incumbent on them of acquiring the means of improving the scientific character of their profession, and therefore of affording increased benefit to the public, by infusing into their practice the powerful aids that real scientists must necessarily impart to it.[166]

Furthermore, Vincent stated that it was surgery as a science which would decide many questions in the way of avoiding operations. The focus on science by Hunter, Abernethy, Cooper, Charles Bell, Vincent, Lawrence, and others was a significant part of the professionalization of surgery. Sir James Paget noted in 1877 that, 'if we are to maintain the rank of gentlemen, … it must be by the highest scientific culture to which we can attain.'[167] It was this enhancement of knowledge and skills through a focus on experimentation and scientific research that I was referring to in Chapter 1 as part of my argument of that a scientific approach was an important component of professionalism and therefore necessary for the achievement of the professionalization of surgery.

Samuel Cooper (1780-1848) was an influential English surgeon and writer. His popular *Dictionary of Surgery* went through several editions and was translated into German, Italian and French languages. He was professor of surgery at University College Hospital, a Fellow of the Royal Society and President of the Royal College of Surgeons of London. He did not believe that Celsus implied a surgeon ought to be insensible to pity but rather that 'during the performance of an operation, this passion should not influence him, as all emotion would then be a weakness.' Cooper described 'this undisturbed coolness, which is still more rare than skill as the most valuable quality in the practice of surgery. Dexterity may be acquired by exercise; but firmness of mind is a gift of nature.'[168] He went on to cite the Swiss physiologist Haller who despite his acknowledged fame in demonstrating surgery

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[165] Cooper, *Illustrations of the Diseases of the Breast*, p. 6.
[166] J. Vincent, *An Inquiry into the Claims that Surgery may be Supposed to Have for being Classed as a Science*. Longman, Brown, Green and Longman, London, 1848. p. vii.
[167] J. Paget, *The Hunterian Oration*, Longmans, Green, And Co, London, 1877, p.42. http://archive.org-details. Accessed 21 September 2019.
[168] S. Cooper, *A Dictionary of Practical Surgery: Comprehending all the most interesting improvements, from the earliest times down to the present period,* Collins & Hannay, New York, 1823, II, p. 443, http://archives.org.details.dictionaryofprac02coop. Accessed 13 December 2018.

upon the dead body wrote, 'I have never ventured to apply a cutting instrument to a living subject, through a fear of giving too much pain.'[169]

Sir William Lawrence (1783-1867) was a surgeon at St Bartholomew's Hospital. He was considered a brilliant scholar and his early writings on man's nature caused much controversy. He joined Thomas Wakley to establish The *Lancet* and was involved in their combined efforts to modernise the Royal College of Surgeons of London. He was recognised for the outstanding quality of his surgical work and writings. He was elected a Fellow of the Royal Society, President of the Royal College of Surgeons of England and Sergeant-Surgeon to Queen Victoria who bestowed a Baronetcy on him.

In his lecture to medical students in1829, Lawrence explained how the performance of an operation was often the least important part of a surgeon's duty and impressed upon them the need to spare the patient from the painful ordeal of surgery if at all possible.[170] Furthermore, he told his students that surgeons 'have no interest at variance with those of the community, … [and] are known only as instruments of good; in restoring or securing health, … [and] in removing pain.'[171]

In 1833, James Wardrop celebrated the use of medicines to avoid operations. He was concerned that 'some individuals seem absolutely to have a predilection for performing surgical operations: whereas we should naturally suppose that nothing would be more repulsive to our nature than the infliction of pain on our fellow beings.'[172]

In his textbook of *Operative Surgery* published in 1850, Frederic Skey stated, 'the requisite qualifications for an operating surgeon are partly moral, partly intellectual, and partly physical.'[173] He considered the moral relationship of the surgeon to his patient was particularly important once an operation was deemed necessary. In addition to this moral or professional relationship, he explained the benefits of sympathy and kindness.

> At such a time a man is the object of just and natural sympathy; and it is rare that sympathy does not tell beneficially upon his mind, provided its expression does not betray, on the part of the surgeon, a nervous disquietude, lest the suffering be greater, and the issue more uncertain, than has been represented'. … A peculiar kindness, and in the example of a female or a child, even of tenderness of manner,

[169] Cooper, *A Dictionary of Practical Surgery,* p. 443; Bibl. Chir. 1775, vol. 2.
[170] Lawrence, 'Lectures on Surgery' pp.33-42.
[171] Lawrence, 'Lectures on Surgery', pp.33-42.
[172] Wardrop, *Lectures on Surgery: Introductory Discourse,* pp.453-459.
[173] Skey, *Operative Surgery*, p.3.

> begets a confidence, which without betraying weakness or uncertainty, fortifies the patient's mind, and reconciles it to the effect.[174]

In this chapter I have referred to the allegations that frequent performance of operations renders surgeons bereft of feeling, and how Brodie and others rejected this as a misunderstanding of the surgeon's demeanour. In his highly regarded publication *Physician and Patient* (1849), the celebrated nineteenth-century Yale physician and ethicist Worthington Hooker (1806-1867) responded to the charges that a physician, 'from his familiarity with scenes of distress becomes unfeeling and incapable of sympathizing with others.'[175] He acknowledged that, 'this may be true of him, if he from the first look at the suffering of his fellow men only as a source of emolument.'[176] He pointed out that to the casual observer, the surgeon:

> may appear to have surrendered his humanity to the cold and stern demands of science, [and] may seem to be devoid of sympathy … [but in reality], his emotions are often oppressive more so than those of the bystanders, for he knows all the difficulties and dangers of the case.[177]

Hooker provides an insight into the emotions of a surgeon who is about to operate and recommended that his readers watch him while he prepared for a serious operation. He pointed out that although the surgeon may appear 'perfectly cool and undisturbed, … the occasional sigh, … the compressed lips, the slightly trembling hands show the extent of his distress, … [but] the instant he begins the operation, they are gone, … for his feelings have now found relief in action.'[178] This 'relief in action' once the operation has commenced is similar to the those described by William Cheselden and other surgeons earlier in this chapter.

In summary, several common themes run through the writings of these surgeons. They believed their goals were in line with those of the community in their wish to alleviate pain and suffering and remove sickness and restore health. In turn, they considered their ability to do so afforded the highest gratification to surgical practitioners. But operations were known to be painful and dangerous, and each surgeon wrote strongly of sparing the patients

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[174] Skey, *Operative surgery*, pp.3-4.
[175] W. Hooker, *Physician and Patient; or A Practical View of the Mutual Duties, Relations and Interests of the Medical Profession and the Community,* Baker and Scribner, New York, 1849, pp.385. https://archive.org>details>physicianandpati00hookuoft, accessed November 2020.
[176] Hooker, *Physician and Patient*, pp.385-390,
[177] Hooker, *Physician and Patient*, pp.385-386.
[178] Hooker, *Physician and Patient*, pp.386-387.

this ordeal unless it was essential. They considered a thorough knowledge of anatomy, dexterity and improving the scientific character of their profession as important.

Surgeons highlighted the importance of the personal attributes of compassion, humanity, mercy, charity, and affability as well as kindness, gentleness in manners, integrity and commitment. They considered these characteristics were also an important part of their public image including in their private practices. While showing sympathy for the patient was not regarded as a sign of weakness, the surgeon whose sympathy made him 'shrink within himself' when operating was considered ill-suited for this task. Undisturbed coolness and firmness of mind during surgery were regarded as most valuable to the surgeon.

They rejected the public perception that surgeons were oblivious to patients' pain and suffering, or that a certain degree of cruelty was necessary in the surgeon's make-up to enable him to perform surgical operations. Some surgeons thought it was possible that regular participation in surgery may have rendered the occasional colleague to appear unfeeling and cruel, rather than their inherent attributes. Others like Brodie disagreed and explained the surgeon's outward demeanour during surgery was part of his anxiety for his patient's welfare and focus on the procedure being undertaken. The need for the surgeon to suspend for a while, feelings of lesser importance in order to focus on the operation at hand was mentioned by Brodie and clarifies Rey's suggestion that a surgeon's coolness is merely setting aside his awareness of the patient's pain for the duration of the operation.[179]

Conclusions

The first aim of this chapter was to explore the emotions experienced by surgeons in peacetime and war, and to examine how these were expressed and shaped their identities and behaviour. An analysis of the comments made by these surgeons has demonstrated they experienced anxiety, disturbed nights, and felt both miserable and sick before surgery, with some surgeons dreading the thought of inflicting pain on their patients. Once the surgery had begun, they were able to exercise self-control and emotional restraint. Those surgeons who participated in wartime surgery with its queues of injured servicemen awaiting surgery, experienced significant emotional turmoil, which they tried to manage by not allowing themselves to focus on the sufferings of any one individual. Self-exploring their emotions shaped their identities and led some surgeons to reject the concept of celebrating war. The personal emotions experienced by these surgeons depicts them as 'men of feelings' and different to the images portrayed in satire, caricature and writings.

[179] Brodie, *Introductory Lecture of Anatomy and Physiology,* MS0470/1/2/5, p.20; Rey, *The History of Pain*, p. 67.

Efforts were made to prepare future surgeons to cope with the emotional challenges and distressing demands of surgery. These included cadaver dissections, observing the sick and suffering patients on hospital wards, and watching operations being performed on awake patients. However, learning dispassion was not an easy task and it is not clear how much this helped them. Some students were unable to cope with these disturbing experiences and abandoned their desire to become surgeons.

Attempts were made by surgeons to avoid or mitigate the pain of surgery by reducing the sensibility of the body through the use alcohol or anodynes, mechanical pressure on the nerves to a limb, or by modifying or speeding up the surgical procedure. Mesmerism or a form of hypnosis enjoyed a brief period of popularity, but the introduction of anaesthesia led to its demise as occurred with the other methods just described.

The second aim was to identify the attributes and values which surgeons considered were most important in their day-to-day encounters with patients. The attributes considered desirable for encounters with patients by the leading surgeons of the day included sympathy, compassion, humanity, charity, kindness, gentleness, integrity, commitment, a scientific approach, and the avoidance of unnecessary surgery. Although emotional restraint or the setting aside of their feelings was regarded as necessary for the duration of an operation, for the ideal surgeon the attributes mentioned were regarded as necessary to not only complete the surgery as skilfully as possible, but also to provide holistic care of the patient.

Amongst the desirable characteristics of a surgeon was that of a scientific approach to the management of surgical illness and expansion in surgical knowledge. In the next chapter I will establish whether surgeons had adopted this approach to new discoveries by the end of my study period.

Chapter 7

Scientific approach of surgeons to new discoveries

Introduction

In Chapter I, I argued that one of the characteristics required for surgery to be regarded as a professional occupation was evidence that its members were committed to maintaining and enhancing the knowledge and skills required to serve the community. In Chapter 2, I showed how the participation of surgeons in education, and in research and experimentation, contributed to this goal. In Chapter 6, I described how contemporary surgeons regarded a commitment to what they regarded as a 'scientific' approach was one of the desirable attributes of an ideal surgeon. This is also a fundamental part of the 'enhancement' of knowledge. Medical practitioners and the public were increasingly faced with a plethora of so called new discoveries and extravagant claims, each driven by expanding advertising techniques. The aim of this chapter is to establish whether surgeons adopted a scientific or evidence-based approach to new discoveries by the end of my study period.

The discovery of anaesthesia in the mid-nineteenth century made pain-free surgery possible and forced surgeons into the forefront of discussions on the appraisal and acceptance or rejection of this new medication. I will use their response to this new discovery as a measure of their scientific approach. Before doing so, I will first establish the conceptualization of pain and suffering during my study period, and how this might have influenced the acceptance or rejection of anaesthesia. This will be followed by a review of the discovery and introduction of anaesthetic medications and an analysis of the response of surgeons and the community to their availability.

Conceptualization of pain and suffering

French historian Roselyne Rey in the introduction to her book *The History of Pain* (1995), remarked that the challenges involved in drawing up a history of pain requires one to 'pursue an evasive subject with a dual nature, at the crossroads between biology and cultural or social conventions.'[1] It is this combination of pain's cultural and social factors that has seen its significance vary throughout the ages and in different civilizations including that of the Western world. Furthermore, Rey regarded an analysis of pain as 'a means of probing the

[1] R. Rey, *The History of Pain*, pp.1-2.

relationship between mind and body, and of examining the dualism that somehow underlies our various ways of thinking.'[2]

Although dualism or a belief in the existence of a duality between the body and the mind has been around for a long time, its roots are attributed to the French philosopher, mathematician, and scientist Rene Descartes (1596 -1650). As social and cultural philosopher Noelia Bueno-Gomez has explained, Descartes considered the body and mind as two different substances each with a different ontological status. The body is like a mechanism that exists in time and space, and which can be measured as well as its reactions and processes. The mind on the other hand lacks these spatial and temporal dimensions and can exist without a corresponding body. Consequently, Descartes's theory regarded pain as something that occurs 'in the body and which can be described in terms of visible, physical, measurable damage (for example, tissue damage).'[3]

Bueno-Gomez described the Cartesian distinction between his *res cogitans* (thinking, mind, consciousness) and *res extensa* (physical world, external thing) as the 'driving force behind the whole structure of thinking in and the organisation of medical sciences and psychology, … [and] the perspective which drove the development of clinical medicine as an empirical science based on evidence.'[4] This evidence-based medicine understands pain from a 'naturalistic point of view; and persons as beings are divided into … the body and the mind.'[5] Although this viewpoint has resulted in much success in the treatment of pain, certain problems remained unresolved or unexplained, leading to an ongoing search for other perspectives.

Physician and ethicist Eric Cassells observed in 2014 that although this mind-body duality theory has persisted for centuries, there is 'a widespread contemporary belief that it is both wrong and an obstruction to understanding humankind.'[6] Cassells was critical of clinical evidence-based medicine and its dependence on Cartesian dualism, and the way it conceptualizes and manages pain and suffering.[7] A number of other philosophers have 'embraced a non-dualistic view of the mind' and developed alternate perspectives parallel to the Cartesian conception of the body and mind, based on an understanding of persons as psychophysical, sociocultural situated beings.[8] In this alternative to the mind/body

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[2] Rey, *The History of Pain*, p.2.
[3] N. Buero-Gomez, 'Conceptualizing Suffering and Pain', *Philosophy, Ethics, and Humanities in Medicine*, 12,7 (2017), p.2. https://doi.org/10.1186/s13010-017-0049-5. Accessed 14 December 2020.
[4] Buero-Gomez, 'Conceptualizing Suffering and Pain', p.2.
[5] Buero-Gomez, 'Conceptualizing Suffering and Pain', p.2.
[6] E. Cassell, *The Nature of Suffering and the Goals of Medicine*, Oxford University Press, Oxford, 2014, p.3.
[7] Cassell, *The Nature of Suffering and the Goals of Medicine*, p.3.
[8] M. Johnson, 'Mind Incarnate from Dewey to Damasio', *Daedalus*, 135,3 (2006), pp. 46-54. https://www.jstor.org/stable/20028051. Accessed 14 December 2020.

dichotomy, they regard pain and suffering as having bodily, psychophysical and sociocultural dimensions, and therefore, 'it is no longer acceptable to consider pain only in physical and suffering only in psychological terms.'[9]

Joanna Bourke has stated that it is no longer radical to question the distinction between the mind and the body, and that 'people-in-pain typically highlight one aspect of the pain-event over another', such as the physical pain of a burn versus the psychological suffering after a fight with a lover.[10] As Bourke pointed out, 'mental pain always involves physical events … and physical pain does not exist without a mental component.'[11] Furthermore, Bourke like Cassells considers mind/body dichotomies as an impediment to scholarship for researchers in the arts and humanities as well as in the sciences.

Pain and suffering are separate terms commonly used to describe unpleasant experiences such as discomfort, distress, or agony. If, as postulated by Rey, pain is regarded as physical, and suffering considered as moral, then historical insights could be circumscribed within the field of physiological pain. If on the other hand one examines the linguistic meaning of these terms, the Latin word *sufferre* means to bear or to endure and necessitates an active subject or a person, whereas pain is more the objectification of this suffering.[12]

In terms of a definition of pain, psychologist Ronald Melzack and neuroscientist Patrick Wall, remarked in 1991 'that despite the importance of pain in medicine and biology, … the word "pain" has never been defined satisfactorily', and they postulated that the diversity of pain experiences may be the explanation for this.[13] Each of the sources I consulted during my research on pain avoided a definition and many were critical of those previously proposed. The current definition of pain by the International Association for the Study of Pain (IASP), describes it as 'an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage', and provides six key notes by way of an explanation.[14]

Bourke has cautioned 'that it is problematic to overlay a late twentieth- and early twenty-first century understanding of pain onto earlier periods', and therefore preferred to define pain as a 'type of event.'[15] This does not deny the importance of the sensory nature of

[9] Buero-Gomez, 'Conceptualizing Suffering and Pain', p.2.
[10] Bourke, *The Story of Pain*, pp.24-25.
[11] Bourke, *The Story of Pain,* pp.24-25.
[12] Rey, *The History of Pain*, pp.3-4.
[13] R. Melzack, P. Wall, *The Challenge of Pain*, Penguin Books, London, 1991, p. 44.
[14] International Association for the Study of Pain (IASP), IASP Terminology, Pain Terms, https://IASP-pain.org, accessed 15 December 2020.
[15] Bourke, *The Story of Pain*, p.3, pp.5-9.

pain, and allows for a person's response to the event.[16] Bourke wrote that considering pain as an event in a person's life would enable reflection on how different persons react and also on the influence of various factors upon their response. Each person perceives pain differently depending upon the experiences they have had in life, and these include their 'sensual physiologies, emotional states, cognitive beliefs, and relational standing in various communities.'[17]

How then were pain and suffering understood during the period of my study? The physician Peter Latham (1789-1875) remarked that 'things which all men know infallibly by their own perceptive experience, cannot be made plainer than words. Therefore, let Pain be spoken of simply as pain.'[18] Joanna Bourke regarded this approach to pain as highly productive, and 'profoundly respective towards the ways peoples in the past have created and recreated their lives. It allows for multiple, even conflicting, characterizations … [and] does not impose a judgement about how people-in-the-past (or, indeed today) ought to characterize pain.'[19] Philosopher Sarah Coakley has argued that people's reactions to pain are 'not simply a matter of genetics, physiology, and circumstance, … the way we interpret our pain is all important for our mode of suffering it.'[20]

The interpretation of pain has varied over the centuries and included theological, evolutionary, and symptomatic concepts. The theological concept of pain was based on biblical statements which considered it to be a consequence of individual sin, with the divine purpose being to remind the sufferer to seek forgiveness and guidance on how to conduct their lives and submit to God's will. In other words, pain 'became a divine retribution or a sign of having been chosen by God, both of which encouraged an acceptance of pain and suffering.'[21] One example of this was the cleric Joseph Townend whom I referred to in Chapter 5, who throughout his autobiography associated the atoning character of his bodily suffering with his spiritual beliefs.[22] Another religious person wrote that 'God's mercy can make even his judgements a blessing; and by wounding the body, he can heal the soul.'[23] The pain of childbirth is quoted as another example of pain being ordained by God.

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[16] Bourke, *The Story of Pain*, p.15.
[17] Bourke, *The Story of Pain*, p.13.
[18] P. Latham, 'General Remarks on the Practice of Medicine', *British Medical Journal*, 28 June, (1862), p. 677.
[19] Bourke, *The Story of Pain,* p.3.
[20] S. Coakley, *'Introduction',* in S. Coakley, K. Shelemay, eds., *Pain in Transformation: The Interphase of Biology and Culture*, Harvard University Press, Cambridge, Massachusetts, 2007, pp.1-2.
[21] V. Hardcastle, *The Myth of Pain*, The MIT Press, Cambridge Massachusetts and London, 1999, p.2.
[22] J. Townend, *Autobiography of Rev. Joseph* Townend, 1869.
[23] George Mogridge, *Thoughts for the Thoughtful by Old Humphrey,* The Religious Tract Society, London, 1841, p.130, https://books.google.nr/books?id=ZBh6ZK_o_xAC7printsec_frontcover, accessed 24 June 2019.

These religious concepts dominated society, modelled education and ruled much of social life, and attempted to give a meaning to suffering and console those coping with pain in the community through the church's teachings and its religious ceremonies.[24] Although a medical practitioner's scientific philosophy implied that his role was to relieve pain and act in keeping with the patient's desire, it is likely some were influenced by the contemporary religious ideology and offered support by way of explaining that pain was ordained by God. The difficulties of obtaining medical care and the cultural traditions in rural and remote areas resulted in many of these patients having no choice but to surrender to their pain and embrace religion as a palliative to their need.

By the late seventeenth and early eighteenth centuries, the rifts between Catholicism and Protestantism meant there was no longer a uniform Christian attitude to pain. The singular importance of the Bible and its literal interpretation hardened the attitudes of many Protestants to pain and the importance of its role in the lives of its believers. Although the strengths of these beliefs varied between different religious denominations, they nevertheless had major implications for the way in which many patients and their families, and some but not all medical practitioners, thought about pain. This included a reluctance to provide or accept pain relief, or to bestow sympathy.[25]

The evolutionary concept of pain regarded it as a protective mechanism which served as a sensory warning when the body was threatened or injured by harmful events. To understand how this came about it is necessary to consider the theoretical discussions on the concepts of life amidst the expanding physiological research during the eighteenth century. Three principal philosophies about the concepts of life and therefore of pain were favoured by different physicians in the eighteenth century.[26]

The first theory of 'mechanism' was based on the belief that the phenomenon of life could be reduced to physical and chemical forces or laws where the human body functioned as a simple machine. Descartes gave a purely mechanical explanation of pain. He used the example of the flame from a fire acting on a person's foot, resulting in particles of fire rushing up a nerve fibre from the foot towards the brain, activating animal spirits which then travelled back down the nerves leading to muscular motion, causing the foot to move away from the flame.

The 'animists' or anti-mechanists reacted to the theory of the mechanists leading to new debates over the traditional doctrines of the soul and the divine order of things. The

[24] Rey, *The History of Pain*, p.86.
[25] Bourke, *The Story of Pain*, pp.88-130.
[26] Rey, *The History of Pain*, p.101.

German physiologist Georg Stahl (1660-1734) did not believe that co-ordinated and purposeful human actions could be explained in terms of the mechanical chain-reactions and he reintroduced the ancient concept of a life force or *anima*. He presupposed that human activity required the presence of a soul as a constantly intervening, guiding power, and the agent of consciousness and physiological regulation and defence against sickness. As Roy Porter explained, Stahl interpreted disease as a misdirected activity of the soul which disturbed vital functions.[27] Animists accepted the mechanical theory had a part to play in pain but superimposed the soul as intervening directly in the functions of the body. Bodily pain was therefore interpreted as a sign that the soul was suffering and trying to unburden itself of this anguish.[28]

The 'vitalists' theory was that biological activities were governed by unknown vital forces peculiar only to living beings and which could not be reduced to physical and chemical laws. This vital force was discovered by the Swiss physiologist Albrecht von Haller (1708-1777) to be inherent in the fibres themselves. Haller demonstrated that 'irritability or contractibility was a property inherent in muscular fibres, whereas sensibility was the exclusive attribute of nervous fibres.'[29] He therefore established that the irritability of muscle fibres was their innate property of contractibility in reaction to stimuli, whereas the sensibility of nervous fibres was their responsiveness to painful stimuli, both of which were independent of any superadded soul or non-material force. His conclusions supported the concept of pain as a protective mechanism and opened the way for a more scholarly debate on sensibility and led to significant consequences for physiology in general and for the comprehension and treatment of pain.[30]

Although Descartes' filaments and animal spirits were replaced with painful impulses and hormones secreted within the brain and nervous system with resulting physiological functions, the Cartesian distinction between mind and body remained until 1965 when Melzack and Wall described their Gate Theory of Pain.[31] They showed that perceptions of pain were moderated by complex feedback mechanisms with the context becoming central to the understanding of pain.

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[27] R. Porter, 'The Eighteenth Century', in L. Conrad, M. Neve, V. Nutton, R. Porter, A. Wear, eds., *The Western Medical Tradition*, Cambridge University Press, New York, 1995, pp.391-394.
[28] Rey, *The History of Pain*, p.106.
[29] Porter, 'The Eighteenth Century', pp. 393-394; Albrecht von Haller. Elementa Physiologiae Sorporis Humani (Elements of the Physiology of the Human Body), Lausannae, Sumptibus M. M. Bousquet et Sociorum, pp.1757-66, https://doi.org/10.5962/bhl.title.3958.
[30] Rey, *The History of Pain*, p.121.
[31] R. Melzack, P. Wall, 'Pain Mechanisms: A New Theory', *Science*, 150, 3699 (1965), 971-979.

For the medical practitioner or physiologist, 'the problematical question of pain could be placed aside from the problem of sin, evil and punishment', by the end of the eighteenth century.[32] In the context of evidenced-based medicine, this meant that 'suffering and pain were dissociated from the context of a theodicy and to be treated scientifically.'[33] Haller's research, the 'dechristianisation of society, the secularisation of thought and the separation between science and metaphysics', changed the perception of pain from having spiritual overtones to one of sensibility or a protective function.[34] Pain came to be seen 'as a warning, alerting us to danger toward our bodies.'[35]

Extenuation of the concept of pain as a protective mechanism to one where it was regarded as beneficial to the healing process and the ability of the patient to withstand surgery occurred in the nineteenth century. This went even further with some claiming that relieving this pain might somehow hamper this process. However, little evidence was provided to support these assertions. American historian Martin Pernick wrote in 1983 that 'a large number of physicians felt that pain had some important – though not necessarily overriding – benefit to the patient'.[36] In his book *For Fear of Pain,* Peter Stanley showed how many surgeons believed that 'pain, far from being undesirable, was natural and beneficial, … [and that] medical practitioners - and their patients - accepted the existence or necessity of pain.'[37] Stanley cited the following statement written in the preface of the 1851 publication, *Mesmerism in India, and its Practical Application in Surgery and Medicine* as one example of such a claim:

> The Royal Medical and Chirurgical Society of London permitted Dr Copeland, without a word of disapprobation to declare that pain is a wise provision of nature; and patients ought to suffer pain while their surgeon is operating; they are all the better for it and recover better.[38]

One example was the use of moxibustion or placing a burning cone on the skin of a patient to infuse the body with external energy and stimulate the healing process. The resulting

[32] Rey, *The History of Pain*, p.90.
[33] Buero-Gomez, 'Conceptualizing Suffering and Pain', p.3.
[34] Rey, *The History of Pain*, p.89.
[35] Hardcastle, *The Myth of Pain,* p.4.
[36] Pernick, 'A Calculous of Suffering' pp.26-36.
[37] Stanley, *For Fear of* Pain, p.288.
[38] J. Esdaile, *Mesmerism in India, and its Practical Application in Surgery and Medicine*. Hartford: Silas Andrus and Son, Ney York, 1851, p. xiii.

pain from the burn sore was regarded as essential in influencing the body to combat the illness and enhance recovery.[39]

The third theory of pain or the 'symptomatic concept', arose in the late eighteenth century when clinicians began to recognise pain as a symptom of underlying disease. According to Charles Newman, the pre-modern diagnostic practice relied on the patient's own account of their illness, the patient's general appearance, an inspection of the urine, sputum and faeces, and the patient's pulse.[40] Historian William Bynum has noted that, 'the patient's own description of his illness was the pivotal point in the diagnostic process.'[41] Newman has shown that physical examination of the patient did not become a common part of diagnosis at Guy's and St. Bartholomew's Hospitals until the 1830s.[42] Although the description of symptoms by the patient and attentive listening by the practitioner were an essential component in their judgement on the possible cause(s) of a patient's pain, medical practitioners later began to seek 'a pure sign which would remove the ambiguities inherent in symptoms, … the meaning of which would be as certain as that provided by the lesion found at dissection.'[43] This resulted in the introduction of the stethoscope for listening to the lungs by Rene Laennec (1781-1826) in 1816, and was followed by other methods of physical examination.[44] The concept of pain as a symptom of disease remained, but it became but one of a number of diagnostic tools.

The perception that sensitivity to pain varied between individuals was a commonly held view in the eighteenth and nineteenth centuries and to some extent still exists to this day. According to Joanna Bourke, sensitivity and insensitivity to pain was considered by some to be linked to a person's race, colour, gender, education, class, wealth, occupation, temperament, intelligence, mental state, or previous exposure to hardships.[45] Furthermore, pain relief was frequently withheld from those in need based on an alleged hierarchy of insensitivity based on these erroneous beliefs.[46]

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[39] H. Deng, X. Shen, 'The Mechanism of Moxibustion: Ancient Theory and Modern Research', *Evidence Based Complementary Alternative Medicine*, 6, (2013), https://doi.org/10.1155/2013/379291, Accessed 14 December 2020.
[40] C. Newman, *Evolution of Medical Education in the Nineteenth Century*, Oxford University Press, London, 1957, pp.86-104.
[41] W. Bynum, 'Health, Disease, and Medical Care', in G. Roussseau, R. Porter, eds., *The Ferment of Knowledge: Studies in the Historiography of Eighteenth-Century Science*, Cambridge University Press, Cambridge, 1980, pp. 211-253.
[42] Newman, *Evolution of Medical Education in the Nineteenth Century*, pp.86-104.
[43] Bueno-Gomez, 'Conceptualizing Suffering and Pain', p.3.
[44] Jacyna, 'Medicine in Transformation', pp.42-46.
[45] Bourke, *The Story of Pain,* pp.192-230.
[46] Bourke, *The Story of Pain,* pp.192-230.

The presumption that injured soldiers and seamen were insensitive to the pain associated with the amputation of a limb was used in the past to justify performing this procedure without any form of pain relief. Cases have been described of injured servicemen who did not feel pain until sometime after the event. This is referred to as 'episodic analgesia' and recognised as having several important characteristics.[47] Autosuggestion and deep meditation have also been postulated as methods of reducing or even avoiding pain. What is clear is that while pain from injuries sustained in battle was a much-neglected issue, it was 'a monumental problem, not only to the patient but also to the surgeons … [and] in the instructions for British army surgeons, … there is minimal reference to pain relief.'[48]

The essential ingredient in handling the pain of major surgery was eventually shown to rely on 'providing the patient with the skills to cope with the pain and anxiety – at the very least, to provide the patient with a sense of control.'[49] Although this understanding was not clarified until the latter part of the twentieth century, it is mentioned here by way of clarification as loss of control was reported as a major problem for those patients who underwent surgery prior to the advent of anaesthesia as described in Chapter 5.

Discovery and introduction of anaesthesia

On 16 October 1846, a twenty-year-old man named Gilbert Abbott was persuaded to inhale a vapour of sulphuric ether by the Boston dentist William Morton (1819-1868) at the Massachusetts General Hospital. After he appeared quite unconscious, the surgeon John Collins Warren (1778-1856) removed a lump from his neck. Abbott could not later recall feeling any pain while the operation was in progress.[50] On 7 November 1846, Morton administered the same vapour to Alice Mohan, a twenty-six-year-old female and after she fell into a deep sleep, her right leg was amputated, during which she did not experience any pain. Henry Bigelow (1818-1890) was then a surgeon at the hospital and present at each of these operations. He had a major interest in what Morton was trying to achieve and a strong supporter of his efforts. Bigelow published the details of these events in an article in the *Boston Medical and Surgical Journal* on 19 November 1846.[51] This article on the discovery of ether anaesthesia has been hailed as the most influential article ever published in the

[47] Melzack, and Wall, *The Challenge of Pain,* p.8.
[48] Crumplin, *Men of* Steele, p.215.
[49] Melzack, and Wall, *The Challenge of Pain,* p.25.
[50] J. Warren, *Etherization with Surgical Remarks*, W. Ticknor & Company, Boston, 1848, p.5, https:wellcomelibrary.orgitem/b21162475
[51] H. Bigelow, 'Insensibility During Surgical Operations Produced by Inhalation', *Boston Medical Surgical Journal,* 35, 16 (1846), pp.309-317, DOI:10.1056/NEJM184611180351601, accessed 2018-2020.

journal later renamed as the *New England Journal of Medicine*.[52] On the following day this landmark article was reprinted in full in the *Boston Daily Advertiser* for the public to read.[53]

News of these historic events quickly spread across the world. A copy of Bigelow's article was sent by his father to Dr Francis Boott (1792-1863) an American physician practising in London. After informing the British press including the *Lancet*, Boott arranged for the London dentist James Robinson (1813-1862) to undertake a trial of ether for dental extraction on 19 December and invited amongst others, the London surgeon Robert Liston, to observe the procedure. Robinson gave the anaesthetic and removed a molar tooth without the patient suffering any pain. Encouraged by what he had observed, Liston carried out the amputation of a 36-year-old man's leg, followed by an operation for an ingrowing toenail on another patient, at University College Hospital on 21 December 1846. William Squire gave the anaesthetic to both patients and neither of them experienced any pain.[54] Liston's distinction as a surgeon and his positive reaction to this experience assured the advent of ether anaesthesia gained prominence in Britain. News of these events received widespread publicity, and such was the excitement, even periodicals published the news that 'We Have Conquered Pain'.[55] As a result, the use of ether anaesthesia spread rapidly throughout Britain.

James Young Simpson (1811-1870) who was Professor of Midwifery at the University of Edinburgh, learned of Liston's experience and on 19 January 1847 he administered ether in his obstetric practice for the relief of pain during childbirth. Two months later he published an article on his successful experience of the use of ether in several obstetric cases.[56] Because Simpson encountered problems with ether, he embarked on a mission to find a more appropriate agent. He and his assistants experimented with various liquids, and eventually found chloroform to be the most suitable. After procuring a purer form of chloroform, Simpson tested the substance in his obstetric practice and found it to be successful for the relief of pain during childbirth. In November 1847, he administered chloroform to three patients who were undergoing surgery by his surgical colleagues. None of these patients experienced pain. On 10 November 1847 Simpson presented the results of

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[52] K. Buckley, 'The Most Important Article in NEJM History', Http://blogs.nejm.org/now/index.php/the most-important-article-in-history/2012/11/01/.

[53] *Boston Daily Advertiser*, 19 November 1846, p.2, cols2-4, H. Bigelow, 'Insensibility During Surgical Operations Produced by Inhalation'.

[54] W. Squire, 'The First Operation Under Ether Anaesthesia in Great Britain', *British Medical Journal,* 2, (1896), pp.1142-1143; R. Atkinson, T. Boulton, *The History of Anaesthesia,* Royal Society of Medicine Services, London, 1989, pp.70-71.

[55] *The People's Journal*, London, vol 2, 9 January 1847, p.25.

[56] J. Simpson, 'Notes on the Employment of Inhalation of Sulphuric Ether in the Practice of Midwifery', *Edinburgh Monthly Journal of Medical Science*, 1. 9 (1847), pp.721-728, http://www.nch.gov>pmc>articles>PMC5822326, accessed 2019-2020.

his initial experiences with the use of chloroform in obstetric and surgical practice to the Medico-Chirurgical Society of Edinburgh and subsequently published these results in a pamphlet on 15 November of that year.[57] The pamphlet caused a sensation. According to John Snow (1813-1858), who was the first specialist anaesthetist in Britain, the pamphlet 'had a wide circulation, and created a great interest. Chloroform was immediately used everywhere to a greater extent than ether had been.'[58]

Despite the initial excitement with which the advent of anaesthesia and the possibility of painless surgery and the relief of pain during childbirth was received, some surgeons, patients and members of the community remained sceptical. According to historian Jacqueline Wolf, 'the controversary generated by Simpson's move has been a hallmark of Obstetrics ever since.'[59] Opinion pieces voicing concerns about the use of anaesthesia began to appear in medical journals and in letters to the editors of public newspapers. The reasons for these concerns are complex and multifarious. Historian Peter Stanley devoted a comprehensive chapter in his book *For Fear of Pain* (2003) to this question and based his discussion around medical, scriptural and philosophical considerations.[60] Subsequently, historian Joanna Bourke discussed a number of possible factors under the categories of medical risks, social concerns, moral anxieties and spiritual dangers, over several chapters of her book *The Story of Pain*.[61] Because my interest is focused on the advent of anaesthesia within the framework of my argument about the professionalization of surgery, I have chosen a combination of the categories identified by Stanley and Bourke, namely - medical, social, religious, modesty and moral, - for my analysis of the possible reasons for the varying reactions to the introduction of anaesthesia.

In discussing the reasons for protraction in the acceptance of anaesthetic agents, Bourke has drawn some parallels with the delays in the introduction of nitrous oxide into surgical practice after the discovery of its pain-killing potential fifty years earlier in 1800. The English chemist and inventor, Sir Humphry Davy (1778-1829), wrote in 1800 that:

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[57] J. Simpson, *Account of a New Anaesthetic Agent, as a Substitute for Sulphuric Ether, in Surgery and Midwifery,* Sutherland and Knox, Edinburgh & Samuel Highley, London, 1847 (November 15, 1847), http://ia800707.us.archive.org>items>39002011124840.m..., accessed 2019-2020; P. Cranfield, 'J. Y. Simpson's Early Articles on Chloroform', *Bulletin of the New York Academy of Medicine,* 62, 9 (1986), pp.903-909.
[58] J. Snow, *On Chloroform and Other Anaesthetics: Their Action and Administration,* John Churchill, London, 1848, p.22, https://hdl.handle.net/2027/, accessed 2019-2020.
[59] J. Wolf, *Deliver Me from Pain*: *Anaesthetics and Birth in America*, The Johns Hopkins University Press, Baltimore, 2009, p.1.
[60] Stanley, *For Fear of* Pain, pp.283-312.
[61] Bourke, *The Story of* Pain, p.277.

> as nitrous oxide in its extensive operation appears capable of destroying physical pain, it may be used with advantage during surgical operations in which no great effusion of blood takes place.[62]

The failure by Davy and his associates to take the next step and apply their knowledge to human patients undergoing surgery has been described as 'one of the great unanswered questions of the history of anaesthesiology.'[63] Possible reasons for this delay have been described by historians Margaret Jacob and Michael Sauter, and I will consider these in my discussion on the use of ether and chloroform later in this chapter.[64]

The publications by Simpson on the use of anaesthesia to relieve the pain of childbirth caused the most vitriolic reaction.[65] Because the focus of my thesis is on surgeons and their patients, I will only refer to pain relief in obstetric practice in so far as it has a bearing on the understanding of the overall story of the advent of anaesthesia. I will therefore not explore the vast historiography available on the use of anaesthetic agents in childbirth.[66]

Medical benefits and risks of anaesthetic medicines

The dissemination of medical advances occurs within the societal context of a particular time and place and its success or failure is greatly influenced by the complex interactions which exists between medicine and society.[67] For the implementation of anaesthesia to succeed, it required the engagement and support of medical practitioners – mainly surgeons, as well as patients, and the wider community. Although the discovery of ether and chloroform was greatly welcomed and received widespread publicity, there were some who supported and some who opposed its use or sought more time to carefully assess these agents.

The two most significant early commentators on the use of anaesthesia in Britain were both surgeons. The first was Thomas Curling (1811-1888). Curling was based at The London Hospital and a founding Fellow of the Royal College of Surgeons of England and later its President, and a Fellow of the Royal Society. In his address to members of the

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[62] H. Davy, *Researches, Chemical and Philosophical; Chiefly Concerning Nitrous Oxide or Dephlogisticated Nitrous Air and its Respiration*, J. Johnson, London, 1800, p.556, https://books,google,com>books>about>Researches_Chemic, accessed 2017-2020.

[63] G. Bacon, 'Review of Norman A. Bergman, The Genesis of Surgical Anaesthesia', *Bulletin of the History of Medicine,* 73, (1999), pp.319-320.

[64] M. Jacob, M. Sauter, 'Why did Humphry Davy and Associates Not Pursue the Pain-Alleviating Effects of Nitrous Oxide?', *Journal of The History of Medicine and Allied Sciences,* 57, (2002), pp.164-176.

[65] Duns, *Memoir of Sir James Y, Simpson,* p.206; A. Hyman, 'Chloroform and Controversary', In R. Atkinson and T. Boulton eds., *The History of Anaesthesia,* Royal Society of Medicine Services Limited, London, 1989, pp.233-236.

[66] Wolf, *Deliver Me from Pain*, 2009.

[67] R. Meyer, S. Desai, 'Accepting Pain Over Comfort: Resistance to the Use of Anaesthesia in the Mid-19th Century', *Journal of Anaesthetic History,* I, (2015), pp.115-121.

Hunterian Society in London in February 1848, Curling remarked that many thousands of operations had been performed on patients under the influence of ether and chloroform, and how this had provided an appreciation of the value of these agents in counteracting the necessity for the infliction of pain.[68] He stated at the outset that 'I know of no purpose served, and of no advantage gained by the infliction of pain.'[69] He observed that operations were generally regarded with dread by the patients and that the pain involved was 'an evil which even the bravest spirits would most gladly avoid.'[70] Curling accepted that the susceptibility to pain could vary between individuals, and that while training the mind and using diverting tactics might increase fortitude in some, he believed there were sound reasons as to why every suitable patient needed an anaesthetic during surgery. He summarized the tribulations of patients awaiting surgery as follows:

> oppressed and overwhelmed by some terrible casualty or harassed and worn out by some tormenting local disease, and counting the hours of their suffering, which instead of inuring them to affliction, has given variety to pain, and heightened their susceptibility – they fully need in the hour of trial, all the solace and all the alleviation, that our humanity can suggest, and our art afford.[71]

Curling pointed out that the infliction of physical pain was not the only suffering produced by the surgeon as 'suffering of the mind arising from the dread of an operation, often far exceeds that of the body endured in its performance.'[72]

He added that:

> fear is the strongest, as well as the most painful of all the passions, and when excited in high degree, … it powerfully depresses the vital powers, enfeebles the whole frame, and even produces death.[73]

Curling made a distinction between the fear of pain and the fear of not surviving an operation and regarded the latter as being more significant. He stated that no surgeon would, if he could avoid it, perform an operation on a person strongly possessed with the idea that he might not recover.[74]

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[68] T. Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, S. Highley, London, 1848, p. 8, https://archive.org>stream>39002011125565,med.yale.edu_djvu.txt, Accessed 2017-2020.
[69] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, p.8.
[70] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, pp.8-9.
[71] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, p.15.
[72] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, p.15.
[73] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, p.18.
[74] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, pp.19-20.

In addressing the issue of administering chloroform to a patient who is in a state of fear, either about the anaesthetic or the operation, John Snow explained the importance of allaying the patient's fears before asking them to inhale the vapour. He wrote that 'it has been said that chloroform ought not to be administered if the patient is very much afraid, on the supposition that fear makes the chloroform dangerous. This is however a mistake; the danger, if any, lies in the fear itself.'[75] He agreed that:

> fear and chloroform are each capable of causing death, … but it seems impossible that fear should combine with the effects of chloroform to cause danger, when that agent is administered with the usual precaution. Fear is an affection of the mind and can no longer exist when the patient is unconscious.[76]

Snow added that 'it would of course be wrong to choose a moment for beginning the inhalation, when fear was producing a very marked depression of the circulation.'[77]

According to Curling, a further benefit of anaesthesia was that surgery could be performed on an anaesthetised patient without the previous compulsion to rush the procedure and enabled the surgeon to employ greater deliberation and composure. Curling considered anaesthetic medicines 'would not place the rude and inexperienced operator on the same level with the adroit and able surgeon', as so much depended on 'the judgement and skill, … on sagacity and decision, … on fertility and tact in expedients.'[78] In other words, anaesthesia would not obviate the need for appropriate attributes, judgement, and technical skills in the surgeon.

By controlling the writhing of the patient, anaesthesia ensured the performance of a delicate and careful dissection could be accomplished. The difficulties experienced in operating on awake patients was exemplified in the following account published in the *Lancet* of an operation on the amputation stump of an eighteen-year-old man's leg in 1824 at the Middlesex Hospital:

> the operation was performed … not without some difficulty, in consequence of the extreme irritability of the stump, … and partly from the obstreperous conduct of the patient, … his motions, which were almost convulsive at this period, seriously endangered the fingers of the operator.[79]

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[75] Snow, *On Chloroform and Other Anaesthetics*, pp.76-77.
[76] Snow, *On Chloroform and Other Anaesthetics*, p.77
[77] Snow, *On Chloroform and Other Anaesthetics*, p.77.
[78] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, p.24.
[79] Middlesex Hospital, *The Lancet*, II, 6 (1824), pp.190-191.

The second surgeon to write about the use of anaesthetic agents was James Miller (1812-1864). Miller was a Fellow of the Royal College of Surgeons of Edinburgh and a Fellow of the Royal Society of Edinburgh and worked in the same Edinburgh hospital as his colleague and friend James Simpson. Miller responded to the criticism and opposition to anaesthetic medicines and especially those about chloroform, in his November 1848 monograph on the *Surgical Experience of Chloroform*.[80] He considered it his duty as professor of surgery in Edinburgh to give an early and clear opinion on the relationships of chloroform to surgery, and explained that:

> because honestly convinced as I am in favour of the agent and of anaesthesia, it fills me with indignation to find there are in some quarters attempts being made to prejudice the profession, and especially the public, against both, and to make it appear as if chloroform, having already run its short day's course, had been quietly gathered to the tomb of all ephemeral innovations.[81]

Miller contrasted the 'excellent and elderly members of the profession, who merely withhold their confidence and patronage of surgical anaesthesia', with those who would 'cry it down, as a thing already tested and worthless.'[82] He claimed some surgeons had profound ignorance of the subject while others had either not 'properly informed themselves, or had their minds so warped by prejudice, as to be incapable of forming a fair impartial opinion on the matter.[83] In describing the reaction of surgeons to the advent of anaesthetic agents, Miller remarked how overall the profession was surprised, excited, and mostly charmed. However, some:

> had their preconceived, and heretofore settled notions sadly jostled and disturbed; not a few grew irritable, and resented the interference; they closed their ears, shut their eyes, and folded their hands; they refused to touch.[84]

He went on to say how some surgeons had made up their minds that pain was a necessary evil which must be endured and muttered that no good would come of this innovation. Miller's critical and judgemental description of his surgical colleagues is surprising at this relatively early stage in the use of anaesthetic agents. Miller observed how on the other hand, the public were greatly excited, if at first somewhat incredulous, as if the news were too good to be true. A number sought and were admitted to the operating theatre

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[80] J. Miller, *Surgical Experience with Chloroform,* Sutherland & Knox, Edinburgh, 1848, pp.1-60, https://archive.org>details>surgicalexperience00millgoog. Accessed 2017-2020.
[81] Miller, *Surgical Experience with Chloroform,* p.14.
[82] Miller, *Surgical Experience with Chloroform,* p.4.
[83] Miller, *Surgical Experience with Chloroform,* p.14.
[84] Miller, *Surgical Experience with Chloroform,* p.7.

of his hospital to see for themselves. This he stated gave confidence to the public not only as to the reality of things being discussed by the public, but also of 'the safety and propriety with which the experiments on our fellow-creatures as affecting this great question were being conducted.'[85]

Miller remarked that anaesthesia afforded great relief not just to the patient but also to the operator, and summarised the feelings of surgeons performing surgery prior to anaesthesia:

> to no ordinary constituted man is pain otherwise than repugnant; whether it occurs in himself or in another. And, hitherto, there can be no doubt that his being compelled to inflict pain, and witness the infliction of it, has always been esteemed by the surgeon as the hardest part of his professional lot. Now this is gone.[86]

Miller regarded a further benefit in having the patient anesthetised was because it enabled the surgeon 'to operate with a mind wholly unoccupied with regard to the feelings of his patient, … [knowing that] he will be in an unconscious sleep; and the surgeons mind, thus undistracted, is, … more competent to deal with the details of the operation – its planning, execution, and completion.'[87]

Re-echoing Curling's earlier observations, Miller wrote that there was no longer a need to rush the operation, and this enabled the surgeon to operate with more certainty, precision and with delicate dissections.[88] Furthermore, anaesthesia benefitted the surgeon as well as the patient and eventually enabled new operations to be devised which was greatly advantageous to the surgeons.

However, some surgeons remained fixed to the idea that the pain of surgery was somehow beneficial to the patient. James Simpson quoted Dr James Pickford from Brighton who wrote to the *Edinburgh Medical and Surgical Journal* in July 1847, stating that 'pain during operations is in the majority of cases, even desirable; its prevention or annihilation is, for the most part, hazardous to the patient, … [and] in the lying-in chamber nothing is more true than this; pain is the mother's safety, its absence her destruction.'[89] Simpson added that the Edinburgh surgeon James Syme had stated 'that he did not attach much importance to

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[85] Miller, *Surgical Experience with Chloroform,* p.8.
[86] Miller, *Surgical Experience with Chloroform,* p.29.
[87] Miller, *Surgical Experience with Chloroform,* p.29.
[88] Miller, *Surgical Experience with Chloroform,* pp.21-30.
[89] J. Simpson, *Anaesthesia or the Employment of Chloroform and Ether in Surgery, Midwifery ETC*, Lindsay & Blakiston, Philadelphia, 1849, p.38, Simpson gave the reference to this quote as: 'On the "Injurious Effects of the Inhalation of Ether,"' Edinburgh Medical and Surgical Journal, July, (1847), p. 258, http://google.co.nz>books, accessed 2018-2020.

causing extinction of pain during operations', and his belief that 'the very removal of pain or "irritation of extraordinary intensity" may even produce death.'[90] As I will show later, Syme changed his opinion soon after and became a major advocate for anaesthesia. Another example cited by Bourke, noted the vice-president of the American Medical Association claimed in 1849 that pain was 'curative … the actions of life are maintained by it.' Without 'the stimulation induced by pain', he insisted, surgery would 'more frequently be followed by dissolution.'[91] The lack of supporting evidence eventually led to the increasingly held view that pain was an unnecessary evil which could be detrimental to the patient and therefore should be avoided.

The first editorial on the use of anaesthetic agents appeared in the *Lancet* on 16 January 1847, and thereafter every weekly volume contained reports of the successful use of ether in minor and major operations.[92] However, reports of problems soon began to appear. The first monograph on ether was published on 6 March 1847 by James Robinson who listed himself as a surgeon-dentist and as the first to employ ether in Britain. He referred to reported cases where ether was said to have failed to achieve insensibility and attributed this to the faulty apparatus being employed for administration. He described the successful use of the equipment he had personally designed.[93] A review of Robinson's treatise published in the *Lancet* noted that the merit of ether was still a 'troubled question' and that 'opportunities have not presented themselves to enable us to test the whole range of its applications … [and) we trust physicians will not be far behind the surgeons in applying ether to the relief of suffering.'[94]

The *Lancet* reviewer who was optimistic that the use of anaesthetic agents would expand beyond surgery, posed the following rhetorical question:

> Is it a proof of the superior intelligence of the age, of the absence of bigotry and prejudice or of the simplicity and evident truthfulness of this great discovery that has caused it to be received with such general approval?[95]

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[90] Simpson, Anaesthesia or the Employment of Chloroform and Ether in Surgery, Midwifery ETC, pp.38-39,
[91] Bourke, *The Story of Pain,* p. 278; J. Harrison, 'On the Physiology, Pathology, and Therapeutics of Pain', *Western Lancet,* 9 (1849), pp. 349-354.
[92] Editorial,'Etherization in Surgical Operations', *The Lancet,* I, (1847), pp.74-75.
[93] J. Robinson*, A Treatise on the Inhalation of the Vapour of Ether for the Prevention of Pain in Surgical Operations,* Webster and Co, London, 1847, p.284. Https://archive.org-details-39002011127579.med.yale.edu. Accessed 4 November 2019.
[94] Reviews, 'J. Robinson, A Treatise on the Inhalation of the Vapour of Ether for the Prevention of Pain in Surgical Operations', 1847, *The Lancet*, I, (1847), pp.284-285.
[95] 'Reviews', *The Lancet,* I, (1847), p.285.

This question was somewhat surprising given that general approval was far from being achieved at this early stage. This was reflected in a subsequent editorial in the *Lancet* in April 1847, which noted the number of operations in some London hospitals had more than doubled since the introduction of ether, leading the editor to question why no detailed analytical account of its use had been undertaken.[96] The editor recommended a scholarly approach and the collecting appropriate information to guide decisions on its use.[97]

Both Curling and Miller agreed that anaesthesia should be limited to appropriately chosen patients. Furthermore, its administration should only be entrusted to a person who had carefully studied the effects on the human body, and who 'by practice has acquired a nice perception of their action, and a full knowledge of their powers and varying effects.'[98] Certain contraindications to the use of anaesthesia were listed, including diseases of the heart and plethoric individuals. Curling warned surgeons that the low blood pressure which might be produced by chloroform, could conceal bleeding from blood vessels which if not searched for and ligated during the operation, might lead to subsequent 'secondary' haemorrhage. Finally, Curling spoke of the inconvenience of patient's vomiting during the induction of the anaesthetic and how this could be prevented by their not eating meat before surgery, and of the excitement with violent action of the muscles which could be subdued by persisting with the inhalation.[99] These recommendations were made to improve the safety and acceptance of anaesthesia.

Curling questioned the reports of 'hurtful effects and increasing fatalities' which had led to a feeling of distrust in the use of anaesthetic medicines. In addressing these misgiving, he provided survival results from limb amputations carried out at the London hospitals with and without anaesthesia. These showed the mortality was double in those patients who had amputations without anaesthesia. Although there were likely to be many important confounding variables in these comparisons, the results were striking. While he acknowledged the fallacy to which statistical results were liable, Curling wrote:

> after all, the ultimate success of painful operations is the test, - the only safe and sure test, by which the benefit and value of anaesthetic remedies can be determined; and it has been plainly shown that so far as our present experience extends, the results amply sustain the views of those who have been most sanguine in their expectations of a diminished mortality from the use of these agents.[100]

[96] 'Reviews', *The Lancet,* I, (1847), p.392.
[97] 'Reviews', p.393.
[98] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, p.29.
[99] Curling, *The Advantages of Ether and Chloroform in Operative Surgery,* pp.28-30.
[100] Curling, *The Advantages of Ether and Chloroform in Operative Surgery*, pp.31-32.

After providing further examples of situations where anaesthetic agents were indicated and contraindicated, Curling concluded that 'there is no surgeon who loves and honours his profession, … who will not rejoice at his office being for ever stripped of even the semblance of inhumanity, and a callous indifference to woe.'[101] Although the full value of anaesthesia was as yet unknown, Curling cherished the hope, 'that by pursuing science, … pain and disease will yield still further to our efforts.'[102]

What is striking about this statement from Curling as a surgeon was his reference to the 'semblance of inhumanity and a callous indifference to woe' during pre-anaesthetic surgery, and his acknowledgment of the importance of 'pursuing science' in resolving the benefits and risks of anaesthesia. These surgeons who were influential exponents of anaesthesia, acknowledged that despite the apparent benefits for both the patient and the surgeon, a scientific approach involving further research and experience was necessary before its overall safety in different circumstances would be established.

Although Curling and Miller gave a positive account of the early use of anaesthetic agents in surgical patients, Curling informed his audience that it remained to be determined whether these anaesthetic agents were safe medicines and acknowledged that some surgeons had yet to gain confidence in the use of them. These concerns were based mainly on the 'danger and inconvenience in their administration, and the hurtful effects produced by them on the constitution and increasing the fatality of operations.'[103] One such fatal case was soon reported in the *Lancet*. A fifteen-year-old girl named Hannah Greener from near Newcastle-Upon-Tyne and who was about to have surgery for an ingrowing toenail on 28 January 1848, died after inhaling chloroform for three minutes. The coroner found that 'Hannah Greener, died from congestion of the lungs from the effects of chloroform.'[104] Although James Simpson defended the use of chloroform and believed her death was due to asphyxia brought about by the inappropriate means used to revive the patient from this event, the opinion of the coroner was widely accepted.[105] After the announcement of this fatal case, others followed, leading some surgeons to become even more uncertain about using anaesthetic agents.

Several factors related to anaesthetic agents led to these uncertainties. These included delays in obtaining insensibility, the variable effects of anaesthetic agents, a lack of

[101] Curling, *The Advantages of Ether and Chloroform in Operative Surgery,* p.36.
[102] Miller, *Surgical Experience with Chloroform*, p.36.
[103] Curling, *The Advantages of Ether and Chloroform in Operative Surgery,* p.26.
[104] Editorial, 'Fatal Application of Chloroform', *The Lancet*, I, (1848), pp.161-162.
[105] J. Simpson, 'Remarks on the Alleged Case of Death from the Action of Chloroform', *The Lancet,* I, (1848), pp. 175-176.

knowledge about the dose of the vapour to use, and problems with defective administrative equipment. Other issues gradually began to arise. In an editorial in the *Lancet* in 1851, under the title 'The Mania for Operations – The New Society', the editor first summarised the benefits which chloroform had conferred upon sufferers from disease, and then added:

> like all such blessings, however, it has its drawbacks and evils, amongst the more conspicuous of which may be mentioned the facility with which patients are now persuaded to submit to the knife, and the encouragement which it holds out to what are called 'promising young men' to 'carve their way into practice'.[106]

Whilst it was to be expected that the frequency of operations would increase once the dread of the pain associated with surgery had been removed, it is important to establish whether there were supportive statistics to confirm this. In a retrospective review of the influence of anaesthesia on the development of surgery on both sides of the Atlantic at that time, Nicholas Green demonstrated in 1979 that although (back then) there was a gradual increase in the number of operations performed, contrary to popular belief there was no evidence from the hospital statistics that the type or extent of surgery then practised was greatly influenced by the introduction of anaesthesia, at least during the early years.[107]

As further experience was gained, anxiety became more widespread about the number of deaths occurring during chloroform-induced insensibility. The editor of the *Lancet* raised concerns in 1854 about 'life being destroyed by carelessness, or by want of prudence in appreciating and avoiding danger.'[108] Expanding further, he observed that:

> week after week deaths by chloroform are recorded, until at length these events have become so common that they scarcely attract attention. This cannot and must not be, … what, then, is to be done with chloroform? Is its use to be altogether prohibited, or can it be persevered in under the precautions which direct the administration of other powerful agents?[109]

This article advocated the indiscriminate administration of chloroform must cease and made a number of recommendations which, if 'insisted on, the administration of chloroform will prove a blessing; without them, its abuse threatens to be a curse.'[110] These recommendations called for chloroform be reserved for those cases in which the intensity or duration of the pain in an operation constituted serious complications, or where insensibility

[106] Editorial, 'The Mania for Surgery', *The Lancet* I, (1851), p.54.
[107] N. Greene, 'Anaesthesia and the Development of Surgery (1846-1896)', *Anaesthesia and Analgesia,* 58, (1979), pp.5-12.
[108] Editorial, 'The Use and Abuse of Chloroform', *The Lancet,* II, (1854), pp.404-405.
[109] Editorial, 'The Use and Abuse of Chloroform', p.404.
[110] Editorial, 'The Use and Abuse of Chloroform', pp.404-405.

was essential for the success of the surgeon's proceedings. Great care was also recommended in how the drug was administered and how this should be reserved for the most judicious hands.[111] Such was the concern that it was regarded as more prudent for patients undergoing less serious but still painful surgery, to be denied anaesthesia.

Martin Pernick pointed out in 1985, that surgeons facing these dilemmas had to decide whether the benefits to the patient of painless surgery were worth the risks, and 'more than a few insisted that the duty to preserve life absolutely outweighed the duty to relieve what doctors termed 'mere anguish.'[112] Pernick cited the American surgeon David Condie who declared, 'it may be our duty to inflict pain to save life, but can scarcely be warranted in risking life merely to avoid pain.'[113] Pernick also provided evidence to show that despite the availability of anaesthesia, one-third of all major limb amputations at the Pennsylvania Hospital between 1853 and 1862 were still performed without an anaesthetic.[114]

In 1848 Curling summarised that for the surgeon performing operations:

> the abatement of physical pain has always been a primary objective of the surgeon, …[and] by a brilliant operation, has always been understood as one safely and efficiently, but rapidly, performed, and at the least expense of suffering to the patient, … [and] the means of effectually securing this important object of the surgeon, … [is] an invaluable gain to humanity.[115]

In conclusion, the advent of anaesthetic agents made it possible for surgeons to undertake surgery without inflicting pain on the patient. News of this achievement was greeted positively by some surgeons while others remained sceptical or opposed to their use. In doing so, some surgeons demonstrated their professionalism and a scientific approach by electing to assess the benefits and risks of anaesthetic medicines based on further experience with its use including in different circumstances and locations. Others may have been more motivated by their biases.

Social environment and the introduction of new discoveries

In considering the successful implementation or otherwise of new medical discoveries, the contemporary attitudes which exist within society have always been important. According to

[111] Editorial, 'The Use and Abuse of Chloroform', pp.404-405.
[112] Pernick, 'A Calculus of Suffering', p.28,
[113] Pernick, 'A Calculus of Suffering', p.193; D. Condie, American Journal of the Medical Sciences, 23, (1852), p.193.
[114] Pernick, 'A Calculus of Suffering', pp.4-5.
[115] Curling, *The Advantages of Ether and Chloroform in Operative Surgery,* p.22.

historians Jacob and Sauter, the social milieu 'set limits and permissions, determining in broad terms the direction given to inherited scientific methods and beliefs.'[116] Joanna Bourke has observed that 'concerns about the demographic distribution of happiness, which would make pain relief a "legitimate goal" arose during the Enlightenment, … [and] pain and pleasure were Romantic preoccupations, which provided the social and ideological conditions necessary to pursue pain.'[117] Medical historian Emanuel Papper postulated in 1995 that it was only a revolution in sensibility, brought about by the romantic writings of the British romantics Samuel Taylor Coleridge (1772-1834), Percy Bysshe Shelley (1792-1822) and others that made anaesthesia possible.[118]

The chemists Humphry Davy and his mentor Thomas Beddows (1760-1808) were part of this circle of romantics and particularly Davy when he was experimenting with nitrous oxide. Although historians Jacob and Sauter agreed with Papper that romanticism was relevant to Davy's and Beddows's scientific decisions, they have shown, as was cited by Bourke, 'that the changes in societal attitudes towards pleasure and pain were then not sufficient to introduce existing agents such as ether in surgery.'[119] In addition to the social milieu, Jacob and Sauter believed the 'theoretical commitments and experimental protocols and the technology available to them in 1800', were the reasons why Davy failed to develop nitrous oxide for pain relief in surgical patients. The advances made by Davy had to wait for the discoveries of next generation of chemists and physiologists to progress.[120]

Attitudes continued to evolve and by the time ether and chloroform were introduced in 1846 and 1847 respectively, the social milieu had become more open to considering new medicines. However, certain other factors in the social environment continued to impact on the acceptance or otherwise of these medicines. Amongst these were concerns that anaesthesia might change the relationship and balance of power between the patient and the surgeon.[121] Potentially, this could favour the surgeon or the patient.

The whole idea of a person being unaware of what was happening to them while they were unconscious under anaesthetic, and thereby ceding all power and influence to the surgeon, was a new development and an anathema to some patients. Previously, patients

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[116] Jacob, Sauter, 'Why did Humphry Davy and Associates Not Pursue the Pain-Alleviating Effects of Nitrous Oxide?', p.162.
[117] Bourke, *The Story of Pain,* p.273.
[118] E. Papper, *Romance, Poetry, and Surgical Sleep: Literature Influences Medicine*, Contributions in Medical Studies, No 42, Greenwood Press, Westport, Con, 1981, pp.10-15.
[119] Bourke, *The Story of Pain,* p. 273; Jacob, Sauter, 'Why did Humphry Davy and Associates Not Pursue the Pain-Alleviating Effects of Nitrous Oxide?', p.164.
[120] Jacob, Sauter, 'Why did Humphry Davy and Associates Not Pursue the Pain-Alleviating Effects of Nitrous Oxide?', pp.161-176.
[121] Bourke, *The Story of Pain,* p.279.

were awake during their operations and although as shown in Chapter 5, they may have experienced loss of power, it was possible, at least for some, to remain their own advocates in confirming the exact location of their body for surgery, assisting the surgeons during debridement of a wound and in making intraoperative decisions on the options and extent of surgery.[122] Peter Stanley quoted Robert Liston as saying that 'a surgeon must be well assisted by the patient or he cannot succeed.'[123] Amongst the other examples quoted by Stanley was the case of a woman who refused ether in 1847 as she preferred to know what the surgeon was doing during an operation to repair lacerations of her perineum.[124] Meyer and Desai cited the American surgeon Henry Bigelow who expressed his concern that once pain had been conquered, surgeons might perform unnecessary surgery.[125]

Fears that the advent of anaesthetics would diminish the authority of the surgeon were raised by those who were concerned about the possibility that 'many patients will take the law into their own hands', by insisting on having anaesthesia.[126] Simpson had not endeared himself to his colleagues when he suggested that patients should consider doing so when the surgeon was reluctant to use anaesthetic agents.[127] Evidence that this might actually take place can be deduced from a letter written by Archibald William Cockburn, Scottish surgeon and Fellow of the Royal College of Surgeons of Edinburgh, to James Simpson in January 1849, in which he stated that 'chloroform will make its own way, but it will be through the patients not thro' the apothecaries.'[128]

Although I showed in Chapter 6 that surgeons experienced feelings of emotional stress about performing surgery, Joanna Bourke noted that 'surgeons themselves valued their reputation for fortitude'. She cited the English physician, anaesthetist, and historian Sir Benjamin Richardson (1828-1896) who questioned whether the availability of anaesthetics might eradicate the 'boldest and manliest qualities' from the surgical fraternity, something which Richardson himself disagreed with.[129] It is possible that this may have been the case with some of the older generation of surgeons who trained in the era when painful surgery was the norm.

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[122] Meyer, Desai, *Accepting Pain Over Comfort,* pp.115-121.
[123] Stanley, *For Fear of Pain,* p.215; R. Liston, *Lectures on the Operations of Surgery,* Lea & Blanchard, 1846, p. 191.
[124] Stanley, *For Fear of Pain,* p. 296, *The Times,* 12 January 1847, 5f.
[125] Meyer, Desai, 'Accepting Pain Over Comfort, p.119, H. Bigelow, *Inaugural lecture, Introductory to the Course on Surgery,* Boston: Harvard Medical School,1848.
[126] Duns, *Memoir of Sir James Y. Simpson, Bart,* pp.222-223.
[127] Duns, *Memoir of Sir James Y. Simpson, Bart,* p.248.
[128] *Letter from Archibald Cockburn to Sir James Simpson*, 30 January 1849, Sir James Simpson, GB 779 RCSEd JYS 143, James Young Simpson Collection, Royal College of Surgeons of Edinburgh, Edinburgh.
[129] Burke, *The Story of Pain,* p.280; B. Richardson, 'The Mastery of Pain, A Triumph of the Nineteenth Century', *Longman's Magazine*, 19.113 (March 1892), p.501.

The very idea of being unconscious and undressed while surrounded by a group of men was considered abhorrent to many women patients. Further anxiety was caused by their fear of sexual exploitation while anaesthetised. This concern was raised in a letter to James Simpson by a 'Dr G', on 15 February 1848 in which he stated, 'I think the chloroform is almost sure to be used as a means of debauching innocent women.'[130] The first reported case of alleged sexual violation during anaesthesia was cited by Strickland and Butterworth as having occurred in Paris in 1847. Although the Law Court entertained the possibility that these accusations may have been an ether-induced dream, the dentist was convicted and sent to prison.[131] Soon afterwards, debates began to take place on whether sexual dreaming could be a side effect of anaesthesia. This possibility and the uttering of obscene and distasteful language by patients of either gender while under anaesthesia were regarded as matters of great contention. Joanna Bourke cited the comments made in 1854 by the physician James Arnott (1797-1883), who incited fears about the immoral consequences of ether or chloroform, 'as respects women particularly', as one example of how these events were used by opponents against these agents.[132]

A further issue arose about the use of anaesthesia to circumvent concerns about modesty by female patients. The Edinburgh surgeon James Miller wrote that 'anaesthesia is of unspeakable advantage in saving the feelings of delicacy and modesty in women' and described his use of chloroform to carry out pelvic examinations and operative procedures on two such women.[133] Reports of sexual exploitation, sexual dreaming and examinations under anaesthesia increased the anxiety and fears of women and the opposition of some medical practitioners and members of the community. In addition to these issues, reports of addiction to chloroform began to appear and raised another disquiet about the use of anaesthetic agents.[134]

Anxieties about modesty and fears of sexual exploitation were genuine. Although the paintings I have displayed in Figure 3 came from an era slightly later than my study, they illustrate better than words what women were concerned about. Both paintings show prominent surgeons in the act of teaching, but the artists place the focus very differently in each painting. Henri Gervex's 1887 painting, 'Before the Operation', portrays the imposing

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[130] Duns, *Memoir of Sir James Y. Simpson, Bart,* p.271.

[131] R. Strickland, J. Butterworth, 'Special Article, Sexual Dreaming during Anaesthesia: Early Case Histories (1849-1888) of the Phenomenon', *Anaesthesiology*, 106, (2007), pp. 1232-1236, E. Hartshorne, 'Remarks on the Case of a Dentist Convicted of Violating a Patient while under the Influence of Ether Inhalation', *Medical Examiner, 10,* (1854), pp.706-730.

[132] Bourke, *The Story of Pain,* pp.281-282, John Churchill

[133] Miller, *Surgical Experience with Chloroform,* pp.57-58.

[134] E. Court, 'The Chloroform Habit acquired by a Hysterical Woman Resulting in Death', *The Lancet,* II, (1903), pp.154-155.

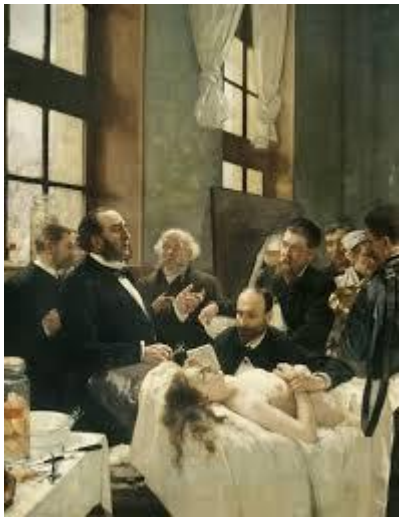
French surgeon Dr Pean in the foreground, lecturing to his colleagues whose eyes are on him while a young woman lies naked on a bed seemingly anaesthetised, and 'merely a means to an end, an attribute of the surgeon.'[135] A seated man grasps her wrist – possibly taking her pulse, while his hand and arm rest directly on the woman's body and groin area. There are only two women in the audience, neither of whom are supporting the patient. One - a nun - is barely visible in the far background, and the other a nurse is standing behind two men and facing away.

In contrast is the highly professional scene portrayed in Thomas Eakins's 1875 portrait in which the celebrated American surgeon Samuel Gross is seen standing at a distance from the patient. He is portrayed as the embodiment of the confident, knowledgeable, and experienced surgeon, teaching medical students, and leading a team of surgical colleagues. In 'spite of the prominence of the surgeon, all eyes are on this patient' who is the most important person in the room.[136] A stern looking nurse is standing close to the foot of the bed and very attentive to, and protective of the patient's welfare. Those observing the operation are separated from the surgery by a physical enclosure (Figure 3). In the words of Dr Therese Southgate, previously senior editor at the *Journal of the American Medical Association* and the person responsible for its cover art and accompanying essays for many decades:

> when the art and science of medicine are truly practiced, it is not the surgeon – or his haemostat – but the patient who belongs at the centre of everyone's attention. It is the physician who should be attending the patient and not the other way round – even when he is featured in his own portrait.[137]

It was the type of scenario depicted so well in the painting by Gervex, that concerned women in the early days of anaesthesia.

[135] T. Southgate, 'The Cover', *Journal of the American Medical Association,* 278, 9 (1997), p.696.
[136] Southgate, 'The Cover', p.696.
[137] Southgate, 'The Cover', p.696.



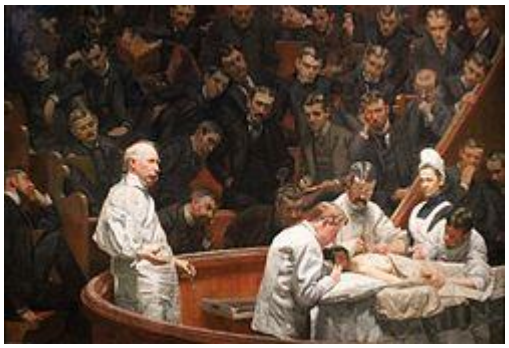


Figure 3. 'Before the Operation' (1887) by Henri Gervex, permission sought from Musee d'Orsay, Paris; 'The Agnew Clinic' (1889), by Thomas Eakins, access allowed by the Philadelphia Museum of Art.

A further apprehension existed amongst the public regarding decorum or the display of unacceptable personal behaviour under anaesthesia. The famous English novelist and poet Charlotte Bronte (1816-1855) remarked in a letter to her friend in October or November 1847 how the reported effects of ether on an acquaintance:

> rather startled me - I had always consoled myself with the idea of having my front teeth extracted and rearranged someday under its soothing influence – but now I should think twice before I consented to inhale; one would not like to make a fool of oneself.[138]

Religious concerns were raised over the use of anaesthesia to limit or avoid pain on the basis that such practice was at variance with the spiritual beliefs about the place of pain in the lives of some members of the community. Two major spiritual conflicts surfaced with the advent of anaesthesia, one relating to its use for painless surgery and the other regarding its place in the relief of pain during childbirth. James Simpson who was also a noted theologian, responded in detail to this claim by explaining that according to the bible, during the first operation ever performed (removing a rib), the person was put to sleep or devoid of sensibility, based on Genesis chapter 2, verses 21 and 22.[139]

[138] *The Letters of Charlotte Bronte with a Selection of Letters by Family and Friends,* M. Smith, ed., vol I, 1829-1847, Clarendon Press, Oxford,1995, p.556.
[139] *The Holy Bible Containing The Old and New Testaments, Authorised King James Version*, Genesis, William Collins, Sons and Company Limited, London, 1949, Chapter 2, Verses 21 & 22.

Following the introduction of chloroform by Simpson in 1847 and its use for pain relief in childbirth, major objections arose on the basis that pain in childbirth was a natural occurrence ordained by God. From a religious perspective, the theological restraints to pain relief in childbirth were based on the declaration in the biblical book of Genesis chapter 3, verse 16: 'Unto the woman he said, I will greatly multiply your sorrow and thy conception; in sorrow thou shalt bring forth children.'[140] Simpson published a pamphlet in1848 in which he explained 'the word translated "sorrow" is truly 'labour,' 'toil', … [and] that does not mean physical pain', and there was no biblical reason to withhold pain relief.[141] Opposition including that preached from church pulpits against his efforts to relieve the pain of childbirth, was mostly based on these verses in Genesis, but they were said to be accentuated because Simpson had 'told the public what the profession alone should have known.'[142]

Earlier in this chapter I discussed the perception that sensitivity to pain may vary greatly from individual to individual, and the erroneous belief that insensitivity was associated with such factors as culture, gender, race, and certain occupations such as the military. These factors were used to deny some members of the community access to appropriate pain relief including anaesthesia. A further important social or cultural consideration was that some patients wished to be able to demonstrate their bravery, stoicism, self-control, and fortitude, and avoided anaesthesia for these reasons. Furthermore, some individuals were fearful that they might not wake up following the anaesthetic. These attitudes and reservations were important considerations in the acceptance or otherwise of anaesthesia.

Public events which influenced the acceptance of anaesthesia

Following the birth of Prince Leopold on 7 April 1853, James Simpson received a letter from Sir James Clark, the Queen Victoria's physician, informing him that:

> the Queen had chloroform exhibited to her during her late confinement. … it acted admirably. It was not at any time given so strongly as to render the Queen insensible, and an ounce of chloroform was scarcely consumed during the whole time. Her Majesty was greatly pleased with the effect, and she certainly never had a better recovery. … I know this information will please you and I have little doubt it will lead

[140] *The Holy Bible* Containing, Chapter 3, Verse 16.
[141] J. Simpson, *Answer to The Religious Objections Advanced Against the Employment of Anaesthetic Agents in Midwifery and Surgery,* Sutherland and Knox, Edinburgh, 1848. pp.1-23, https://onlinebooks.library.upenn.edu/webbin>lookupid, accessed 2018-2020.
[142] Duns, *Memoir of Sir James Y. Simpson, Bart,* p.223.

> to a more general use of chloroform in Midwifery practice in this quarter than has hitherto prevailed.[143]

The chloroform was administered to Queen Victoria by John Snow. Six months later Snow was invited to Lambeth Palace in London, where on 20 October 1853 he successfully administered chloroform during the confinement of Mrs Thomas the daughter of the Archbishop of Canterbury. Chloroform was again successfully administered by John Snow to Queen Victoria on 14 April 1857 for her next confinement and the birth of Princess Beatrice. These events bestowed both Royal, and by deduction, ecclesiastical approval on the use of anaesthetic agents in the relief of pain in childbirth.[144] Many of those who had previously 'declared pain to be a biological necessity, were now careful to keep a little chloroform in their bags lest they lose their patients to more accommodating rivals.'[145]

A second event which created major medical and public interest in Britain about the benefits of anaesthesia were the instructions issued in a Medical Memorandum on 23 September 1854 by Dr John Hall, Inspector General of Hospitals, to military medical officers preparatory to the British Army landing in the Crimea. This memorandum, which was also published in the public press, contained the following instructions relating to amputations in wounded soldiers:

> Dr Hall takes this opportunity of cautioning medical officers against the use of chloroform in the severe shock of serious-gun-shot wounds, as he thinks few will survive where it is used. But as public opinion, founded, perhaps, on mistaken philanthropy, he knows is against him, he can only caution medical officers, and entreat they will narrowly watch its effects, for, however barbarous it may appear, the smart of the knife is a powerful stimulant, and it is much better to hear a man bawl lustily than to see him sink silently into the grave.[146]

Reaction to these instructions was swift and resolute. James Syme who had by then become an ardent supporter of anaesthesia, wrote to *The Times* on 29 September contradicting Hall's 'doctrine' and stating:

> it seems requisite to state, as the result of long and ample experience in opposition to what Dr Hall 'thinks' on the subject, that chloroform does not increase the danger of operations performed during a state of exhaustion, however extreme; that pain,

[143] Duns, *Memoir of Sir James Y. Simpson, Bart,* p.274.
[144] R. Atkinson, T. Boulton, *The History of Anaesthesia,* p.501.
[145] R. Atkinson, T. Boulton, *The History of Anaesthesia,* p.236.
[146] *The Illustrated London News*, 23 September 1854, pp. 289-290, 'The Crimea Expedition, Medical Memorandum', British Library, accessed 20 April 2018.

> instead of being 'a powerful stimulant,' most injuriously exhausts the nervous energy of a weak patient; and that, therefore, so far as the safety of operations may be in question, chloroform proves useful directly in proportion to the severity of the injury or disease and the degree of exhaustion or shock.[147]

This was followed by the publication of another letter in *The Times*, written by James Simpson on 26 January 1855 to Colonel E. Napier, in response to Napier's earlier letter to *The Times* headed 'doings in Scutari'. Simpson's letter which was forwarded to *The Times* by Napier, outlined the safety of chloroform, and provided two tables of results as evidence. Following several important remarks on the use of chloroform, Simpson took issue with the 'unhappy and unfeeling language in which Dr Hall's order was couched', and how his remarks about 'the beneficial and stimulant effects of the knife is so utterly groundless and absurd', adding that 'patients who would inevitably sink under 'the smart of the knife without chloroform can endure it successfully with the aid of chloroform.'[148]

Hall's memorandum resulted in a major reaction and further public discussion on the role of anaesthesia and forced him to later withdraw his instructions. Physician and historian Henry Connor showed in 1998 that the use of chloroform during the Crimean War was determined by the opinions and experiences of medical staff and by its availability, and concluded that, 'John Hall's caution against its use probably had only a limited impact and then only in divisions or regiments where the opinions of the senior medical officers concurred with his.'[149] Historian Neil Metcalfe concluded in 2005 that 'the Crimean War offered as much help in the development of anaesthesia in the mid-19th century as attributed to Queen Victoria.'[150] The figures cited in Metcalfe's article on the use of anaesthesia by British surgeons during the Crimean War confirmed Connor's findings that it was widely used when available.

Scientific approach and professionalism amongst surgeons

So far in this chapter I have provided an overall account of the opinions of different surgeons on the advent of anaesthesia and the scientific approach displayed in most of their writings.

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[147] *The Illustrated London News,* September 23, 1854, p.29, 'Professor Syme on Chloroform in Operations', *The Times,* London, 12 October 1854, p.9, The Times Digital Archive Web, accessed 19 April 2018.
[148] *The Times,* London, 5 February 1855, Issue 21969, p.8, E. Napier, J. Simpson, 'The Use of Chloroform in Cases of Wounds and Amputations', The Times Digital Archive Web, accessed 19 April 2018.
[149] H. Connor, 'The Use of Chloroform by British Army Surgeons during the Crimean War', *Medical History*, 42, (1998), pp.161-193.
[150] N. Metcalfe, 'Historical Article: The Influence of the Military on Civilian Uncertainty about Modern Anaesthesia between its Origins in 1846 and the End of the Crimean War in 1856', *Anaesthesia*, 60, (2005), pp.594-601.

It is also important to establish how much significance was being assigned to a science-based approach during the education and training of surgeons.

In Chapter 6 I wrote about the surgeons who displayed and fostered a science-based approach in their practice of surgery leading the surgeon Frederick Skey to refer to the mid-nineteenth surgeon as one who practised the highest principles of scientific medicine. But how true was this for the wider surgical fraternity throughout the length and breadth of Great Britain? The influential London surgeon and past President of the Royal College of Surgeons of England, John Vincent (1776-1852), did not necessarily agree. In acknowledging the importance of a scientific approach by surgeons, he stated in 1847 that:

> surgeons have a duty, incumbent on them, of setting about acquiring the means of improving the scientific character of their profession and therefore of affording increased benefit to the public, by infusing into their practice the powerful aids that real science must necessarily impart to it.[151]

However, he lamented that the current arrangements to induce young men to follow up their studies and improve themselves, had no precise bearing upon real scientific pursuits, as all it achieved was to incite them to mere accumulation of facts.[152] He observed that if the process by which the minds of those intended for the surgical profession were not developed in a scientific way, and the expansion of their intellect not encouraged by the proper means, 'we cannot be surprised that surgery should not present itself with the illuminated features of a science.'[153] He also remarked that the practice of surgery was being taught and pursued by prescription but without much on the principles of science, and therefore was little more than a collection of unstable and fleeting opinions dominated by those in prominent positions.[154]

A comprehensive review of Vincent's controversial article was published in the *British and Foreign Medico-Chirurgical Review* in 1848, in which the reviewer, presumably a surgeon as he used the word 'we', agreed with many of Vincent's conclusions. The anonymous reviewer remarked on the superiority of the education of physicians over surgeons and stressed the need for improvement in the systems of early education, training, and mental discipline of young surgeons. In responding to Vincent's focus on the importance

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[151] J. Vincent, *Observations on Some Parts of Surgical Practice: to which is Prefixed, An Inquiry into the Claims that Surgery May be Supposed to have for being Classified as a Science*, Longman, Brown, Green and Longman, London, 1847, pp. vi-vii. http://archive.org/stream/b28042128/b28042128_djvu.txt. Accessed 20 October 2019.
[152] Vincent, *Observations on Some Parts of Surgical Practice,* pp. xxvi-xxvii.
[153] Vincent, *Observations on Some Parts of Surgical Practice,* pp. xxvii.
[154] Vincent, *Observations on Some Parts of Surgical Practice,* pp. xxix-xxx.

of surgeons incorporating the 'principles of science' into their practice, the reviewer remarked that 'it is not everyone, however, who professes to base his practice on principle, - in other words, to make the ascertained laws of physiology and pathology the foundation of his treatment, - who is really entitled to the designation of a scientific practitioner.'[155] He considered the reasons for this was because surgeons 'as yet know far too little of those principles, to enable us to adapt them by any means invariably as safe guides.'[156]

While the state of surgical knowledge may not have been sufficiently advanced to provide an abundance of stable scientific principles, several principles had been established through research activities and observations by surgeons over the previous one hundred years, as discussed earlier. The importance of a scientific approach and of continuing to expand scientific principles were reiterated in 1877 by the renowned English surgeon-scientist James Paget (1814-1899). In his Hunterian Oration he stated that if surgeons were to 'maintain the rank of gentlemen … it must be by the highest scientific culture to which we can attain.'[157]

The question I am seeking to address in this chapter is not limited to the use of scientific principles in the direct care of individual patients *per se*, but also to the more general one of whether surgeons based their critique of new discoveries like anaesthesia on scientific principles or criteria. Following an analysis of the various responses including those by Curling, Miller and the others in journals, letters, and lectures, I believe there is sufficient evidence to support the overall conclusion that surgeons had begun to incorporate a scientific approach as part of their appraisal. Surgeons noted that by 'pursuing science', the results would demonstrate the role and safety profile of these medicines. They called for the collection and publication of outcome data based on experience with the use of anaesthetic remedies.

The focus on identifying risk factors, complications and contraindications, and the sharing of recommendations on the safe administration of anaesthetic medicines, were further evidence of a scientific approach. By the end of my study period in 1858, a scientific approach and participation in research by surgeons was gathering momentum, and within ten years resulted in the introduction of the other great discovery at the end of my period of

[155] Analytical and Critical Reviews Art II, British and Foreign Medico-Chirurgical Review, 1848, vol I, pp.320-332; Vincent, 'Observations on Some Parts of Surgical Practice', pp.364.
[156] Analytical and Critical Reviews Art II, pp.320-332.
[157] J. Paget, *"The Hunterian Oration",* Longmans, Green and Co, London, 1877, http://archive.org-details Accessed 30, October 2019.

study, namely aseptic surgery by Joseph Lister (1827-1912), and which addressed a further unresolved major risk in surgery – that of infection.[158]

While it must be acknowledged that there were surgeons who objected to anaesthesia based on personal bias, religious reservations and perhaps for some their belief in the benefit of pain, a review of the literature suggests that most were professional in their cautious attitude. Many surgeons, some of whom I quoted in Chapter 6, recognised the importance of social considerations including the feelings of the patients and responded to these. Inevitably, there will have been those who failed, but overall, I believe there is sufficient evidence to show that by the middle of the nineteenth century surgeons had begun to adopt a scientific approach to new discoveries in their day-to-day practice of surgery.

An examination of Lister and his work demonstrates how surgery had become by then a professional occupation, and how surgeons had come to embrace the attributes of professionalism. In his review of Lister in 2013, historian Michael Worboys has drawn attention to what he referred to as some of the 'neglected features of Joseph Lister's work', and how 'he made himself an exemplar of a new form of professionalism, which made constancy and vigilance in practice a moral duty for surgeons.'[159] Lister's professionalism was seen 'not only in his demeanour and character, but also in his operative performance at every level: no detail was too insignificant for his attention.'[160] Lister's 'principles, professionalism and performance', were a major milestone in the professionalization of surgery and through which he offered his fellow and future generations of surgeons, a better way forward.[161]

Conclusion

The aims of this chapter were to establish whether evidence could be found to show that surgeons, having demonstrated a commitment to the enhancement of knowledge and skills, also adopted a scientific approach in their critique of new discoveries. After describing the historical conceptualization of pain and suffering as the contextual background to this chapter, I have summarised how the discovery of the ether and chloroform introduced a new era of pain-free surgery and pain relief during childbirth. Surgeons were in the forefront of discussions on implementing these far-reaching discoveries and I have used their response as a marker of their scientific approach in the assessment of medical discoveries.

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[158] J. Lister, 'On the Antiseptic Principle in the Practice of Surgery', British Medical Journal, II, 351, (1867), pp.246-248.
[159] M. Worboys, 'Joseph Lister and The Performance of Antiseptic Surgery', Notes and Records of the Royal Society, 67,3 (2013), pp. 199-209. https://www.jstor.org/stable/43287684. Accessed 17 December 2020.
[160] Worboys, 'Joseph Lister and The Performance of Antiseptic Surgery', p.201.
[161] Worboys, 'Joseph Lister and The Performance of Antiseptic Surgery', p.201.

The response of surgeons to the advent of anaesthesia varied from those who were supportive to those who opposed its use. Some feared anaesthesia would change the surgeon-patient relationship and result in their loss of power and control once patients began to demand these medicines. Others – perhaps a few – were proud of their stoicism and ability to cope with the emotional demands of operating on awake patients. Some others - probably even less – held the erroneous belief that the pain of surgery was somehow beneficial to the suffering patient.

The reactions of surgeons have confirmed a willingness by the majority to consider the benefits and risks of anaesthesia in their decision-making process on whether to embrace these remedies. Despite the early pressure from some colleagues to assimilate anaesthesia into their surgical practices, many surgeons waited for more information and recommendations on their use in differing situations and locations. In so doing, surgeons displayed a scientific and professional approach in their efforts to resolve the many unknowns including the cause of deaths that accompanied the early use of anaesthetic agents.

The response from surgeons to the introduction of anaesthesia demonstrates that a critical scientific approach to new discoveries had become a part of their armamentarium. However, there was still much to be accomplished in ensuring that those in surgical training were taught and learned the importance of a scientific approach.

Chapter 8

Conclusions

The aims of this project were to discover the history of the professionalization of surgery and what this meant in practical terms for the relationship between surgeons and patients. The period between 1745 and 1858 was chosen as this was the time during which surgery was transformed from a manual craft into an elite profession. Historical sources in the fields of humanities, medicine, education, art, and English literature were studied and an analysis undertaken of the perspectives of patients and surgeons on the influence these changes had on surgeon-patient encounters. The objectives were to bring together the research findings from the different resources and analyses and thereby contribute to the scholarship in this area.

In the introduction, I argued that the professionalization of surgery was achieved through the occupation of surgery encompassing the characteristics of a profession and by its practitioners or surgeons' embrace of the attributes of professionalism. Using a variety of sources, these characteristics and attributes were identified. Characteristics included surgeons organising themselves into surgical corporations or associations, focusing on education and learning, and maintaining and enhancing the knowledge and skills necessary to meet the surgical needs of the community. The elements of professionalism were revealed to include certain attributes, service commitments and obligations. These were expressed in the standards of social and occupational behaviour and ethical codes, developed to ensure satisfactory doctor-patient encounters and self-regulation.

Physicians, surgeons, and apothecaries originated from different backgrounds with surgeons - unlike the physicians - regarded as members of a trade rather than a profession. Following their separation from the restrictive union with the barbers, surgeons organised themselves into surgical corporations, and the education and training of future surgeons gradually moved from the traditional apprenticeships in the community to the new hospitals, adjoining educational amenities, and to other opportunities for learning in independent private facilities, the colleges, and the expanding universities. The teaching and learning of anatomy and of new subjects like physiology and pathology became more surgically focused and formal examinations were developed with the granting of a qualification from the surgical colleges. Evidence of education, training and a qualifying examination in surgery became necessary for surgeons to practice surgery in British hospitals and eventually for surgeon-apothecaries who wished to undertake the more minor surgical procedure in the community.

Surgery expanded and surgeons became increasingly involved in scientific research and experimentation leading to the expansion of the science and art of surgery.

The commercialization of medical practice in the eighteenth century led to the emergence of profiteering individuals and the inappropriate behaviour by some medical practitioners. The rules and restrictions of everyday conduct and the behavioural norms defined by manners and morality and expressed in courtesy books became ineffectual in guiding the behaviour of medical practitioners, leading to a search for a more sincere way of defining and guiding human behaviour as it related to the practice of medicine. The Scottish physician and moralist John Gregory reconceptualized medical morality and described the concepts, principles, and attributes upon which standards of behaviour and the fiduciary responsibilities of medical practitioners or professionalism could be based.

Gregory's principles and standards of professionalism were transformed into a series of ethical codes by the Manchester physician and ethicist Thomas Percival and published in 1803 as *Medical Ethics*. Amongst these codes were those which focused on ethics and etiquette. Percival developed a number of codes specifically for surgery and surgeons. Percival's codes provided guidance on standards of behaviour and patient care, a process for dealing with the unacceptable conduct of medical practitioners, the disputes which arose between colleagues and a method for self-regulation. Unlike North America, *Medical Ethics* was never formally accepted by the national medical organisations in Britain. Although there is insufficient evidence to confirm the widespread use of *Medical Ethics* by medical practitioners in Britain, this document provided a basis for discussion on the behaviour and self-regulation of practitioners in the first half of the nineteenth century, at a time when the importance of professionalism and professional status actively emerged.

The perspectives of the patients were based on the experiences of six patients who underwent major surgery between 1811 and 1842 (prior to anaesthesia), and of fifty-six patients who sent letters to one surgeon between the years 1812 and 1840. Common themes from these two independent sources were the reluctance of female patients to undergo breast examination and surgery, the uncertainty of diagnosis, the varying opinions on management, and the lack of communication often interpreted as the withholding of important information by the surgeons. Reliance on surgeons was not just for high-level advice about their illnesses but also for simple every-day life and domestic matters. The emotional and physical torment experienced by those who had surgery was described in graphic detail with some feeling like condemned criminals awaiting execution, being forced to surrender their liberty, and those who experienced a loss of control over what was happening to them.

Patients experienced a range of attitudes amongst the surgeons they encountered. These varied from the few who were considered arrogant, dominant, and unfeeling to the many who showed respect and sympathy for their patient's feelings and were regarded as considerate, compassionate, and empathetic. Some patients were aware their surgeons suffered emotional distress during surgery and were concerned for their welfare. The overall opinion about surgeons was a positive one, with an appreciation of the kindness and support they experienced despite the stresses they were under when performing surgery. Based on this analysis it is concluded that the behaviour of most surgeons demonstrated the attributes of professionalism and standards of care in keeping with the requirements of a surgical profession during that era.

The views of surgeons on their encounters with patients, the attributes they considered desirable for these interactions, and the sensibilities and emotions they experienced in peacetime and in war were sought through a review of their writings, lectures, and correspondence. Surgeons experienced great responsibility when recommending surgery, and suffered emotional anxiety, disturbed sleep, and feeling miserable and sick before operating.

Surgeons worried about inflicting pain on their patients, but once the operation had begun, they were able to exercise self-control, emotional restraint and complete the procedure. Exploring their emotions helped them to articulate their feelings and shape their identities.

The attributes that surgeons considered desirable for encounters with patients included humanity, sympathy, compassion, emotional restraint, charity, kindness, gentleness, integrity, affability, commitment, a scientific approach, and the avoidance of unnecessary surgery.

Surgeons with 'undisturbed coolness' were regarded as those most able to perform surgery with confidence and ease. Deficiencies were described as over-operating, poor technical skills, and pride in their speed, daring and dexterity, with the latter two disregarded as of doubtful value in comparison with the more highly prized attributes of humanity and diligence.

Surgeons rejected the idea that callousness was necessary for the surgeon to perform surgery, or that cruelty was an innate characteristic of a surgeon. Some surgeons regarded those who could look with indifference on the agonies of another person as unsuitable to practise surgery. Those surgeons who communicated kindly with their patients were said to receive the most respect from them and their relatives.

One of the attributes described by surgeons as desirable in their colleagues was a scientific approach to the management of surgical illness and the critical appraisal of new discoveries. The most significant discovery during the period of my study was that of anaesthesia. This forced surgeons into the forefront of discussions on the evaluation and acceptance or rejection of this new medication. The response of surgeons varied from the many who were supportive or sought more information to those who were opposed to its use on various grounds. Leading surgeons advocated pursuing further research and experience to establish the safety of anaesthesia. Overall, evidence was found to state that by the middle of the nineteenth century, surgeons had begun to adopt a more critical scientific approach to new discoveries in their day-to-day practice of surgery. There was however much to be accomplished in ensuring that a scientific approach was part of their education and training. The reactions of patients ranged from excitement and even disbelief, to those with serious concerns about social, religious, modesty and moral issues, and apprehension about not awakening after surgery.

By the end of my study period the occupation of surgery had encompassed the characteristics of a profession, and its practitioners or surgeons embraced the attributes of professionalism during their encounters with patients. This was acknowledged by *The Medical Act 1858* which established the state recognition of the medical profession of which surgery and surgeons were an integral part. The Act also formalised professional regulation and provided a mechanism for upholding the standards first developed by Gregory and Percival, and the basis of which continued to be necessary for surgeons to ensure satisfactory surgeon-patient relationships and their own self-regulation.

The findings from this project explain how the professionalization of surgery and surgeons was achieved and the impact professionalization had on the professional encounters between patients and their surgeons.

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