

CHAPTER 6

The Afterlife of an Operation

Narratives of Victory

'The perfecting of ovariotomy has resulted in the saving and prolonging the lives of multitudes', surgeon John Halliday Croom declared in 1896, adopting a salvational tone that was common among surgeons as they reflected upon the triumphs of their craft over the previous decades.¹ Surgeons of the late nineteenth century had seen remarkable changes in their field and to Croom's mind, as to many others', it was ovariotomy that most evocatively conveyed the remarkable ability of surgeons to cure. The lengthy battle for the operation's acceptance reinforced a narrative of victory among the profession, augmented by the fact that it was women—the wives, mothers and daughters of Britain, the Empire and beyond—who were being drawn away from the clutches of disease. This fitted with broader understandings Victorian surgeons had of themselves as a civilising force, their life-saving work a melding of sagacity and selflessness. Already by 1877 Thomas Spencer Wells had proclaimed that his ovariotomy operations alone had added eighteen thousand years to the lives of European women, a claim that was duly repeated by the medical and general press over the following years.² By the end of the century, the fruits of ovariotomists' labour appeared manifest in the many hundreds of successful cases that continued to be reported in the medical literature. Gatherings of medical societies in the final decades of the century frequently give rise to speeches similar to Wells' and Croom's, which weaved together the success of ovariotomy with a broader narrative of surgery which stressed the craft's unprecedented progress from a dark age of butchery to its present incarnation of modern wonderment. Connecting contemporary practices with their historical lineage brought doctors into contact with the cultural value which came with longevity and tradition. Historicising the craft was a way to restore equilibrium between science and art, which some felt was threatened by the growing centrality of the laboratory to medicine. In the last years of the century, there was a resurgent interest in the role of history within medical education as a means of ensuring students became well-rounded doctors, able to look beyond the laboratory and recognise the value of history, as well as literature and philosophy, in shaping the modern medical man; in essence, many doctors sought to reclaim the gentleman-physician ideal for the profession.³

Underneath the celebratory stories of surgeons there lurked, however, a rather more complex status to ovariotomy and what it represented. Through it, the past, present and future of surgery intermingled uneasily, as the operation—while still in use—was also utilised by surgeons to try and understand both the controversial past of surgery and its recent progress. Surgery before this time was increasingly viewed with a sense of disbelief: how, some wondered, could surgeons have worked under circumstances where there was no anaesthesia, no antisepsis and no abdominal surgery? How could practitioners of the early nineteenth century have been so blind to the possibilities of ovariotomy? Such sentiments were entangled with an apprehension as to where the future of surgery lay and a desire on the part of many to look back at the past decades for guidance. By the turn of the century, the history of ovariotomy gave rise to both disbelief as to the way surgery had been only a few decades earlier, as well as nostalgia for an era that had passed. Moreover, while thought by many to have revolutionised surgery, ovariotomy was also beginning to lose some of its pre-eminence as a versatile surgical tool that could be used to rectify an array of medical problems. Increasingly, the value of the operation—as well as the theories which underpinned it were challenged by new ideas in physiology. All the while, ovarian surgery continued to be a central part of surgical practice, sometimes even flourishing in new ways. In fact, despite the controversies of the 1880s explored in Chapter 5, procedures involving the removal of one or both ovaries were being performed more than ever. Up until the late 1930s, the term 'ovariotomy' remained common in medical parlance, although the meaning of the word, long a source of confusion and contention, was becoming ever more complicated. For these reasons, the transition of ovariotomy from a 'contemporary' practice to an 'historical' one was without any definitive lines of demarcation. Yet, fast forward to today and 'ovariotomy' is a word seldom used by surgeons and rather more by historians. What then happened to ovariotomy after the controversies surrounding it peaked in the late nineteenth century? And how did it shift from being a contemporary phenomenon to an historical one?

Evaluating this transition is useful in that it goes beyond a simplistic account of the 'decline' of ovariotomy. What I offer instead is something more akin to exploring the 'afterlife' of the operation. By doing so I intend to show how circularity operated—and continues to operate—between contemporary and historical accounts of the procedure, while also seeking to problematise our understanding of innovation in terms of acceptance or rejection. The broader point I make is that histories constructed by turn-of-the century surgeons should be recognised for their historiographical significance rather than only as whiggish constructs. The 'traditional' doctor-authored account of medical history often remains grist for the mill to social historians of medicine, 'a simplistic straw figure, cited only that it may be trounced', as Frank Huisman and John Harley Warner have put it.⁴ This chapter instead conceives of surgeons' turn to history as a significant part of ovariotomy's innovation, rather than merely reflections upon an already-established innovation. For it was through the production of historical accounts that the operation's identity as a striking and significant moment in medicine was moulded. Furthermore, surgeons' reflections on the operation revealed a difficult relationship with the concept of innovation that was not merely read in terms of triumph. As Victorian surgeons grappled with connecting past, present and future, so too this chapter interlaces their sense of history with contemporary historians', emphasising connectivity between understandings then and now of ovariotomy which are often underplayed. This chapter is about both ends and beginnings.

ALL IN A NAME? DECLINE, DIFFUSION AND SURGICAL LINGUISTICS

Medical innovations are often historicised as either diffused and accepted or definitively rejected. Surgery is no exception. Writing on the history of gynaecological operations, Ann Dally argued that 'new operations were invented and either flourished and developed or declined into oblivion'.⁵

In the case of ovariotomy however, neither option is sufficiently explanatory as to what happened to it towards the end of the nineteenth century. There has been a tendency for histories of the operation to conclude with the outcries that came from many in the profession in the 1880s and 1890s that ovarian surgery was being performed excessively, an episode which acts as a convenient and dramatic endpoint to its historical narrative. Ornella Moscucci, for instance, describes the continued echoes of the ovariotomy controversy in ensuing debates as to whether obstetricians or general surgeons had the 'right' to perform pelvic surgery.6 But it was, she argues, the Imlach affair in 1886 which 'brought into relief not only beliefs about the biological basis of femininity, but also profound tensions within the obstetrical profession over the propriety of radical operations'.⁷ Lawrence Longo and Regina Morantz-Sanchez, albeit looking at the American experience, conclude similarly that there was a decline in radical ovarian surgery in the 1890s, followed by a shift to more conservative procedures. 8 As will be shown here, in Britain at least, the transition in surgical style was not necessarily so smooth.

In part, the difficulty of unpacking this moment in the history of the operation is because further consideration is needed of how exactly we measure decline and dissemination in surgery, and the extent to which such a framework is even useful. Sally Wilde has applied the 'career' innovation path—a characteristic approach in innovation studies—to surgical operations. As she sees it, 'operations have careers, and the processes through which they are developed have many parallels to the processes through which other technological innovations are developed'.9 Wilde separates operations into those which might be classed as 'production line operations' and those which are 'unstable objects'. In the former category she locates procedures such as tonsillectomy, performed with increasing frequency from the early twentieth century onwards and, despite going through various fashions and periods of decline, has been continually practised from the time of its inception. If not completely standardised, the operation has at least become a stable part of surgical culture. In the other category are operations that enjoyed a brief vogue before disappearing entirely. Wilde suggests as examples Battey's operation and nephropexy, the latter a moderately controversial operation which became popular in the late nineteenth century and involved surgically treating the condition commonly known as 'floating kidney'. 10 Thus, Wilde establishes a dichotomy between those surgical novelties that 'succeed' and those that 'fail'.

Wilde is right that some operations have identities more durable than others. But surgical operations are inherently unstable entities and the staged 'career' approach to technological innovation can oversimplify understandings of 'new' surgery. Meanings of operations shift continually, no matter how long and established their history. A tonsillectomy is performed, experienced and interpreted quite differently today than from how it was in the 1920s. Nephropexy as well, once ridiculed by much of the surgical profession, is in fact in use again today, but framed by an entirely difference medico-cultural context. Even if the technical objective remains the same, there is a continual negotiation between surgical nomenclature and the meaning of an operation, which complicates notions of success and failure.

Ovariotomy similarly belies the staged career model. In the last decades of the nineteenth century, the question was less whether ovariotomy was accepted or rejected but what it had come to mean. Such concerns, as we have seen, were not new; the definition of ovariotomy was often in flux and, in particular, defining the difference between ovariotomy and oöphorectomy had significant ethical ramifications. But during the late nineteenth century, the relationship between nomenclature and procedure grew steadily more unwieldy and was subject to increasing linguistic complexity. By the end of the 1880s, the terms used to describe ovarian operations had expanded so greatly that it left many surgeons unsure about what the original and most popular term, 'ovariotomy' actually meant. 'Ovariotomy' usually indicated the treatment of tumours and cysts. Oöphorectomy tended to signal treatment for inflammatory conditions, diseases of the Fallopian tubes and the removal of the ovaries as a means of bringing on the menopause. But these definitions were by no means hard and fast and could be used interchangeably. For example, 'oöphorectomy' could also be taken to indicate the removal of both ovaries, while 'ovariotomy' could refer to the removal of just one of them, regardless of the pathological reason behind the operation. Intermingled with this were other terms, including 'double ovariotomy', 'removal of the uterine appendages', 'Battey's Operation', and 'salpingo-oöphorectomy', and which together, served to further complicate the language of ovarian surgery.

Surgical textbooks, which might be expected to offer a degree of nuance, did little to clarify the definition of ovariotomy. In their 1897 monograph *Diseases of Women: A Handbook for Students and Practitioners*, Arthur Giles and John Bland-Sutton, surgeons at the Chelsea Hospital for Women, who were by the 1890s two of the most prolific performers

of the operation in London, described ovariotomy as 'the removal through an incision in the abdominal wall of tumours and cysts of the ovary and parovarium'. 12 Fourteen years later, Victor Bonney and George Comyns Berkeley, colleagues of Giles and Bland-Sutton, gave an even vaguer definition, referring to ovariotomy simply as 'the removal of an ovarian tumour, either cystic or solid', omitting to mention whether the term could be applied to operations where both ovaries were affected, or only to those where just one ovary was removed. 13 Lay conceptions of the operation were undoubtedly even cloudier. This was significant. Intertwined with the issues of patient consent and surgical abuse of power that cases such as Beatty versus Cullingworth had raised, was the question of the right a surgeon had to change and adapt a procedure mid-operation, as had occurred in the case of Alice Jane Beatty when her second ovary was removed, she claimed, without her consent. Sally Wilde has suggested that surgeons' freedom to adapt in this way highlights hierarchical structures within medicine, demonstrating the power surgeons have historically wielded in moulding new procedures as they saw fit. 14 Implicit in this hierarchical structure was also a power over patients: what might seem to be a simply a question of nomenclature was, through the experience of those who actually underwent the operation, equally an ethical one.

This did not mean the issue didn't trouble some in the profession too; 'the nomenclature is so various, and some of its terms so ambiguous, that all will concur in the advisability for the adoption of certain words which will indicate clearly particular operations', wrote one surgeon on the matter in a letter to the British Medical Journal in 1886. 'What is "ovariotomy?" he appealed. 15 A response a few weeks later from an anonymous Fellow of the Royal College of Surgeons indicated concern was prevalent: 'with every succeeding advance, fresh difficulties in division and in nomenclature have arisen' the author argued, 'the question, "what is ovariotomy?" is one which, at the present moment, it is perfectly impossible to give a definite and scientific answer to'. 16 The author's implication that 'ovariotomy' failed to provide an adequately scientific definition suggested that the proliferation of different types of procedure was not the only issue at hand. By the end of the 1880s, the term was beginning to appear outdated, unscientific and unhelpful; in part because it did little to indicate the pathology of the tumour being treated by the operation. Younger surgeons were increasingly cognisant of the importance histology held in their clinical calculations.

Ovarian pathology was fertile ground in this respect. Histological investigations had only reinforced the long-held notion among medical practitioners that the ovaries were an extremely common site of disease, and this was reflected in surgical pathology, a field that was led by John Bland-Sutton at the turn of the century. It is no coincidence that Bland-Sutton combined his specialism in ovarian surgery with a strong interest in the histology of tumours, asserting in 1906 that it was because of the structural complexity of the organ with its multiplicity of tissues that the ovaries were with 'extraordinary frequency the source of tumours'. 17 Although 'ovarian tumour' and 'ovarian cyst' continued to be used, more precise terms were increasingly employed to describe the variety of growths that could occur, including adenomas, paraovarian cysts, fibromas and sarcomas. Regardless of speciality, many surgical terms in use were perceived to fail in reflecting precise pathology; 'ovariotomy', with its misnomered suffix, highlighted how scientifically imprecise popular surgical terms could be.18

On a purely lexical level, a decline in the use of the term ensued from the 1880s. Though a slightly crude approach—looking as it does at the quantity rather than content of conversation—the volume of discussion regarding ovariotomy in the medical weeklies provides a useful overview in this regard (Fig. 6.1). Looking at the number of times the word 'ovariotomy' was cited in an article of any type in the Lancet and British Medical Journal during the six decades between 1880 and 1939, we see a continuous decline in the use of the word. There is a sharp drop in particular from the first to the second decade of the 1900s, during which 'oöphorectomy' was increasingly favoured to describe ovarian operations of all types. By the 1940s, 'ovariotomy' had almost entirely disappeared from medical publications in Britain, excepting where older cases were cited as supporting evidence to new developments in physiology and surgery, or where doctors prefaced their work with a brief historical introduction. While the term was in clear decline, that decline was arguably slow, considering its acknowledged imperfections. In 1933, the eminent obstetrician Herbert Spencer used the term to give a 'Review of 658 Ovariotomies' that he had performed in his career. He described ovariotomy as 'the removal of an ovarian or paraovarian tumour, including the excision of a tumour from the ovary, with the retention of the rest of the organ' (although not including the removal of 'normal or small cystic ovaries'). 19 Spencer's definition alluded to the greater use of conservative

	Lancet	British Medical Journal
1880–1889	440	541
1890–1899	391	441
1900–1909	229	266
1910–1919	78	100
1920–1929	58	70
1930–1939	31	41

Fig. 6.1 Number of articles in which 'ovariotomy' is cited in the Lancet and British Medical Journal (1880-1939) (Source Elsevier Science Direct Database (http://www.sciencedirect.com) and *The BMJ* online archives (http://www.bmj. com/archive) (accessed 29 August 2013))

techniques that was by then occurring in ovarian surgery and his 658 cases included a range of technically distinct procedures. Yet given the nature of the publication—a review of his surgical work that spanned over forty years—it was only 'ovariotomy', it seems, that could adequately convey his practice during that time, in what was both a contemporary medical report and an historical account of his career.

The continued sensitivity surrounding 'oöphorectomy'—a word deeply associated with over-operating—that continued into the 1890s may explain why 'ovariotomy' did not shift easily from medical language, even as its meaning became uncertain, and where 'oöphorectomy' was technically a more accurate term for any operation that involved the removal of the whole ovary, as the majority of 'ovariotomies' did. The structure of the word offered a degree of ambiguity which potentially protected surgeons from being associated with radical interventions, the suffix 'otomy' denoting surgical interference but not surgical removal. Medical nomenclature is not easily changed once it has become common parlance, nor are clarity or technical accuracy the only factors which occasion its use. As one medical commentator reflected in 1940, medical terminology is a 'mixture in which historical and sentimental factors play a large part'. Ovariotomy, which had come to represent a poignant and triumphant episode in surgery and which was deeply steeped in history and emotional resonance, retained a powerful symbolism that was not easily lost.

Indeed, 'ovariotomy' never quite disappeared from scientific use. Looking internationally, it is noticeable that medical researchers still occasionally use the term today, showing that, as Stuart Hall has described it, 'we never cleanse language completely', as well demonstrating the subtle linguistic shifts that can occur translationally in medicine. Ovariotomy' remained deeply embedded in medical language even after concerns began to be raised as to its clarity in the 1880s. Well into the twentieth century meaning was shifting to accommodate the term, rather than terminology being promptly altered to reflect changing understandings of the operation. The historic achievements that had occurred in ovarian surgery were indelibly associated with that one word: 'ovariotomy'. Nonetheless by the end of the century, the reputation of ovariotomists for remarkable success was coming under threat, as the long-term effects of ovarian surgery began to be scrutinised more closely. Past triumphs were now being challenged by fears for the future.

Afterlives: Patient Experiences After Ovarian Surgery

In the 1890s and early 1900s, serious concerns began to arise about the fates of those who had undergone ovariotomy. In part this was a continuation of anxieties already present by the 1880s, about the probable sterility of those who had had both ovaries removed and the consequences this might have upon the general health and wealth of the populace, closely bound up as it was with the politics of reproduction. In the 1890s concerns widened out to the general long-term health of the patient; 'what is the condition, mental and physical, which obtains in a castrated woman? I care not if it be said that mortality is small. But what are the symptoms in after life?' asked Charles Routh, physician to the Samaritan Free Hospital, in 1894.²² As has been discussed already, the importance of tracking the post-operative outcomes of those who underwent abdominal surgery was already acknowledged by surgeons, who recognised that the risk of complications and subsequent death in the weeks after an operation often remained high. But by the end of

the century surgical mortality rates were sufficiently low so as to make serious discussion about the longer-term effects of such operations worthwhile. Medical texts such as John Lockhart-Mummery's The After-Treatment of Operations (1903) were novel in that they focused wholly on the recovery period and called for surgeons to give greater attention to the health and individual needs of their patients after an operation was complete.²³

The interest in the long-term consequences of operations intersected with the growing attention of life insurance companies to the risks of further ill-health in surgical patients.²⁴ Insurance companies were wellestablished by the mid-nineteenth century, as was doctors' involvement in the life assurance business. 25 But the interest of such companies in surgery in the early twentieth century was a new departure. In the 1900s, the Life Assurance Medical Officers' Association published pamphlets which brought surgery into the fold of insurance claims, acknowledging that the field had until recently been led by physicians. The inclusion of surgery was based partly on an understanding that there was an increase in serious but survivable operations taking place, making surgery a potentially lucrative market for insurance policies. The encroachment of the insurance industry upon surgery generated vigorous discussion about the influence of both pre-operative health and the postoperative period upon surgical risk. At a meeting of the Life Assurance Medical Officers' Association, surgeon Alfred Pearce Gould identified three possible risks that needed to be considered: first, the loss of function that came with the removal of certain parts of the body—Gould echoing the debates eighteenth-century practitioners had entered into regarding the effect of organ removal upon the body's physiology—second, the risks of additional injuries and diseases that the operation entailed, and third, the effects of surgery upon the nervous system.²⁶

Having been performed so prolifically over the last three decades, and with an ever-present degree of controversy, the long-term effects of ovariotomy were exemplary of the type beginning to be studied in more detail by the 1890s, and some of the conclusions being reached about the operation were worrying. Most concerning of all was that the operation appeared to be implicated in the development of cancer.²⁷ Understandings of cancer were considerably transformed in the nineteenth century, during which time malignancies came to be understood as local in origin rather than constitutional. As Ornella Moscucci has shown, this had a significant impact upon cultural perceptions of the disease. By the early twentieth century, Moscucci argues, cancer had become a potent public health issue, as doctors and other concerned parties strove to high-light that if the disease was caught early, it was possible to cure it, challenging the sense of fatalism that lingered around the 'dread disease'.²⁸ The long-held assumption that women were more susceptible to cancer than men only intensified during this time; cancer was thought to attack women's breasts and reproductive organs with peculiar aggression.²⁹ In general, cancer deaths were thought to be increasing. The phenomenon was linked with modern lifestyles; cancer was the physical price of the industrialised, fast-paced, nervous life of Western society.³⁰ Doctors discussed the possibility that a nervous disposition in a woman could cause cell disruption, which in turn increased the risk of cancer, particularly breast cancer. A potent metaphorical reciprocity between degeneration and cancer began to play out unhappily and the language used to describe cancerous change was often that of inescapable decline.³¹

A source of great suffering for those afflicted with them, malignancies of the womb were the focus of a turn towards surgery for treating cancer in the 1890s.³² Gynaecologists soon demonstrated the potential for surgery to provide a solution to cancer as the curative rates for cancer of the cervix, including advanced cases, begin to increase substantially following the introduction of new procedures for the disease.³³ In stark contrast, ovarian malignancies remained virtually untouched by such developments. The difficulties in detecting ovarian tumours in their early stages continued to be a problem for surgeons, to whom cancer of the ovary remained as it always had been: a fearful and insidious disease. Surgeons in part rested the justifiability of radical surgery for ovarian tumours on the possibility that a growth might be an early malignancy or might become malignant.³⁴ But in cases of undoubted and advanced cancer, operations carried very little hope and were rarely performed. As surgery for cancer of the cervix became a symbol of hope in the battle against the disease, surgery for ovarian malignancies remained 'an operation...of a desperate character...only carried through because the removal of the growth offers at least a small chance of life, while the alternative to removal is certain death'. 35 The continued difficulties in both diagnosing and treating ovarian cancer would cement the disease's reputation as a 'silent killer'. 36

Indeed, it seemed plausible to some that ovarian surgery was in fact a cause of rather than a cure for cancer. Surgeons began to cast a critical eye upon the records of past ovariotomists, arguing that the procedure increased the chances of a woman developing cancer. The most avid proponent of this theory was William Roger Williams, who had previously been surgeon at the Middlesex Hospital, one of the few hospitals

to have specialist cancer wards.³⁷ Like others, Williams connected cancer to ageing. Breast cancer, for example, seemed more likely to occur after the menopause when the ovaries were no longer active. By this logic, Williams argued, removing the ovaries caused a premature ageing of the reproductive system and thus increased the risk of malignancy. Controversially, he used Thomas Spencer Wells' records to show what appeared to be a dramatically high incidence of cancer among women who had had ovaries removed by Wells, particularly—but not exclusively—those who had had both removed. Of the eighty-eight patients of Wells' that had died since the operation and where the cause of death was known, Williams reported that thirty-two had perished from cancer, a mortality rate of over one in three. This he compared to cancer mortality in the general population of women, which he placed at one in fifteen.³⁸ Williams' analysis brought an unwelcome angle not only to the much-revered legacy of Thomas Spencer Wells but to ovariotomy as a whole. By Williams' estimation, there were two possibilities: the first was that Wells had operated on more malignancy cases than he had admitted to, whether knowingly or unknowingly. The second was that surgical treatment for local disease had potentially devastating effects on the rest of the body, especially if performed upon the reproductive organs.³⁹

Williams's views did not gain widespread acceptance. But they mingled uneasily with other concerns that were being raised about the longterm consequences of ovarian surgery, one of the most widely discussed of which was whether the operation might be responsible in causing insanity when performed upon women who already exhibited tendencies towards mental fragility. If this was the case, it not only undermined the panacean optimism of the 1880s, which had led some practitioners to remove the ovaries in an attempt to cure madness, but it completely reversed the relationship between surgery and insanity, positing the former as a cause rather than a cure. Surgeons and alienists alike were producing cases where operations of all types appeared to have triggered a severe mental reaction. Various arguments were put forward as to the cause of post-operative insanity, from septic shock to the effect of anaesthesia to the anxiety of the patient undergoing the operation. 40 Many feared operations of the reproductive organs came with the greatest risk to the nerves; in regard to women, this idea hinged upon the connection between the ovaries, the menopause, and the mental precariousness which the latter was thought to induce. 41 In 1906, the Life Assurance Medical Officers' Association issued a pamphlet warning of the risk of acute melancholia following ovariotomy and castration. 42 It was yet

another permutation of the perpetual dialogue between the reproductive organs and the wider bodily economy that was expressed through the operation.

The passing of time and accumulation of cases meant that a plethora of information on the post-operative lives of ovariotomy patients was available by the early 1900s. The most exhaustive study was that authored by the Chelsea Hospital surgeon Arthur Giles. Published in 1910, A Study of the After-Results of Abdominal Operations on the Pelvic Organs recorded one thousand operative cases, mainly operations upon the ovaries, Fallopian tubes and uterus, performed by Giles since 1894, and which included follow-up information on 728 of the cases where he'd been able to trace the patient. Giles built upon the already present networks of informal correspondence that existed between patients, their usual medical attendants and operating surgeons, and which often saw the latter attempt to follow up on former cases at a later date; his work anticipated a general trend among surgeons towards more consistent reporting of the 'remote' results of operations. 43 Giles' former patients were asked a series of questions ranging from the operation's physical effects ('have you had any pain since the operation?') to its impact on sexual relations ('have marital relations been the same as before the operation?') to the vexed question of its impact upon mental health ('are you usually cheerful, irritable, or depressed?').44 Where possible, patients were asked to submit to a medical examination too. (see Fig. 6.2). 45 Giles was able to follow up on eighty per cent of his cases, a remarkable endeavour given that locating and corresponding with former patients was not always easy and there was not necessarily a motivation on the part of patients to participate in the exercise.⁴⁶ If the results were to be believed—some were hesitant about Giles' selfreporting of his own cases⁴⁷—they appeared to show just how significant the impact of an operation could be on a patient's life; twelve months after their operation, ninety per cent of Giles' patients reported that their health was better than it had been before the procedure. Giles also allayed some of the more extreme fears about what happened to women who had both ovaries removed. Reflecting on two hundred such cases, he reported that '70 per cent of the patients regained perfect health and rigour and retained their sex-instincts; that the legends of women developing bass voices and growing beards were pure romance; and that there was no more tendency to insanity after double ovariotomy than there was after any other abdominal operation', thus challenging the concerns voiced about the physiological and psychological effects of removing the ovaries. 48

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◆ Fig. 6.2 Arthur Giles, A Study of the After-Results of Abdominal Operations on the Pelvic Organs: Based on a Series of 1000 Consecutive Cases (1910). Part of Giles' table showing the results of operations that involved the 'Total Extirpation for Ovarian Tumours'. Giles provided one of the most detailed accounts yet of the long-term effects of ovariotomy and other forms of ovarian surgery (Credit Wellcome Collection CC BY)

Giles' study broadly corroborated similar reports about abdominal and gynaecological surgery published during this period, but it provided perhaps the most exhaustive analysis. 49 By dint of the sheer detail of his work, the shimmers of heroism associated with ovariotomy could only be eroded by what was an in-depth examination of patients' lives after the operation. While most women confirmed they had experienced a general improvement in health, Giles' study also showed the variation in post-operative experience. Those such as A.C., who complained of being 'worse in myself at times' or C.S., who, although better than before the operation was 'still rather weak', were statistically successes, but for whom the long-term outcome had been rather less good. Giles' results also showed just how long and drawn out the process of recovery from an abdominal operation was; one year on from their procedure, only sixty-eight per cent of his patients had fully recovered, while a further eight to ten per cent were 'incapacitated during all this time'. 50 Giles' work also addressed the question of how risky it was to leave behind the second, healthy ovary, in case it later became diseased, something which had been a source of contention in the Beatty versus Cullingworth case. Disease recurrence had only occurred in ten per cent of Giles' cases, which some practitioners viewed as a relatively small risk, but it would have been a risk, nonetheless, that not all surgeons would have been willing to take.⁵¹

Assessments of the long-term effects of ovarian surgery allayed some of the fears about its consequences. But it also compelled surgeons to consider more carefully the implications of removing the organ. By the early 1900s new trends in medicine internationally were once more challenging and changing the techniques of British ovariotomists.

COULD OVARIOTOMY EVER HAVE BEEN CONSERVATIVE?

It has been suggested by Annmarie Adams and Thomas Schlich that during the late nineteenth century a significant shift occurred—a new paradigm even—in which surgery came to be principally based upon physiology. They argue that surgical innovation was increasingly centred upon restoring or correcting physiological function through surgical measures, exemplified by the growing interest among surgeons in experimental organ transplantation.⁵² Applying this to ovarian surgery, Regina Morantz-Sanchez has contended that while 'moral qualms may have produced the most dramatic of the critiques of over-operating' it was in fact these 'ongoing attempts to explore the chemical, physiological, and pathological processes of the female reproductive system' that was the coup de grâce for the regular use of radical ovarian surgery at the end of the nineteenth century.⁵³ Historians have highlighted a deeply symbiotic relationship between physiology and clinical practice that was at the centre of this; both Schlich and Chandak Sengoopta argue that it was increasing concerns about the long-term effects of ovarian surgery that in fact spurred on experimental ovarian transplants by European gynaecologists in the early 1900s. At the heart of this was the work of Viennese gynaecologist Emil Knauer, whose experimentation with re-grafting transplanted ovarian tissue in rabbits was prompted by his concerns about the acute menopausal-like symptoms some women experienced after having both ovaries removed.⁵⁴ Although ultimately abandoned by the 1930s, Knauer's experiments inspired numerous performances of ovarian transplants in Europe and America over the next three decades, not only to restore ovarian function in women who had had ovaries removed, but also to treat a vast range of other conditions, including mental illnesses. As Schlich notes, during this early phase of transplantation surgery it was ovarian transplantations that were the most common form of the procedure.⁵⁵ Thus, the early decades of the century saw a striking turnaround in physiological understandings of the ovary, which—in theory at least—saw the introduction of ovarian tissue replace its removal as a cure-all for the maladies of women; if the rationale and technique of surgery had changed, one thing was consistent: the identity of the ovary as an organ highly amenable to surgical interference and which saw it, once more, prominent in the formulation of new surgical techniques.

From these physiological experiments—both animal and human—an idea was gaining traction that the ovary produced 'internal secretions', somewhat mysterious products of the organ which appeared to influence the development and maintenance of the reproductive system. It was this, Regina Morantz-Sanchez has contended, that precipitated a shift towards conservative ovarian surgery in the 1890s, characterised by

'the trend among younger students to resect (cut away parts) of organs wherever possible', and by increasing divisions between 'conservative' and 'radical' ovariotomists. 56 Here, however, the British and American experiences seem to have differed. In Britain, not only was there considerable scepticism as to the usefulness of taking a more conservative approach, but what exactly constituted conservative surgery of the ovary was not clear. 'Conservative surgery' is a rather problematic term which has received surprisingly little attention from historians since Gert Brieger addressed the shift between 'radical' and 'conservative' types of operative surgery in late nineteenth-century America. Principles of conservative surgery were of course not novel to the late nineteenth century: John Hunter's aphorism that operations were 'the defect of surgery' had long been embedded in surgical philosophy.⁵⁷ But, as Brieger contends, by the end of the nineteenth century the meanings attached to both 'radical' and 'conservative' surgery were complicated, the latter, in particular, having a number of meanings. Generally, it alluded to the preservation of as much bodily tissue from the surgeon's knife as possible; but, Brieger argues, 'in the last decades of the nineteenth century radical could also mean conservative in the sense of complete or finally curative; conservative of life'. 58 To add a further complication, it was also possible for tissue-preserving techniques to be potentially curative. Thus, 'radical' and 'curative' were no longer necessarily equated with one another as they had been earlier in the century; the conservative could also be the curative. 59

Brieger's fine-grained analysis concludes with his assertion that during the middle and late decades of the nineteenth century, technically conservative surgery prevailed in America, with resection deemed considerably more effective and desirable than radical surgery. But the most important aspect of his analysis is that it shows that competing surgical philosophies of radicalism and conservatism did not necessarily form the basis of a hard and fast professional schism; the definitions of both were simply too elastic, especially when it came to ovariotomy. In part this was because conservative surgery had thus far been defined through operations on the external parts of the body, such as amputations, making any kind of relationship between operations of the internal organs and conservative surgery a novel concept. From the early decades of its innovation, ovariotomy had been conceived of and understood as radical; radical ethically in that it represented a major shift away from surgical norms, and radical in that, up until this time, surgical removal of

the whole ovary had been seen as the only sure way to cure an ovarian tumour, and where therapeutics likes tapping and medicines were viewed as the more conservative alternative. But being conceived of as 'conservative' had its appeal to ovariotomists, keen to distance themselves from the unfortunate associations between 'radical' surgery and unnecessary operating. Aided by its rather flexible definition, some began to depict ovariotomy as a conservative procedure. Samaritan Free Hospital surgeon George Granville Bantock argued that there could be a multitude of meanings to conservative ovarian surgery; that it could apply equally to the removal of the second ovary in cases of suspected double disease, removal of just one ovary if the second was not thought sufficiently pathological to necessitate removal, or could also mean resection of the diseased part of the organ to ensure the preservation of healthy tissue.⁶¹ 'Conservative surgery of the ovary' also at times referred to hysterectomies where ovarian tissue was preserved, as it had become relatively common practice for surgeons to remove the ovaries along with the womb during hysterectomy, the logic being that without the womb the ovaries would become useless and possibly dangerous appendages.

Chief among the early champions in Britain of resectioning was Christopher Martin, a Birmingham-based gynaecological surgeon and protégé of Robert Lawson Tait at the Birmingham and Midland Hospital for Women. Tait had retired from hospital practice in the mid-1890s, following controversies in his private and professional life, and had died aged fifty-four in 1899.62 His death, which had been preceded by those of Thomas Keith in 1895 and Thomas Spencer Wells in 1897, marked the end of an era in abdominal surgery. This gave greater intellectual space to young surgeons like Martin to innovate. Martin began to experiment with conservative techniques for diseased ovaries and Fallopian tubes, spurred on by the claims about the various physiological after-effects of oöphorectomy. Publishing his results in 1898, Martin was cautiously optimistic about his findings.⁶³ Among his operations were five resections of the ovary for cystic, dermoid and fibrous disease, histological tissues that, it appeared, were relatively easy for the surgeon to 'shell out' from the rest of the ovary (see Fig. 6.3). All five cases had been successful and that the patients were aged between twenty and thirty-three, and thus of childbearing age, gave extra weight to Martin's argument for more conservative measures.

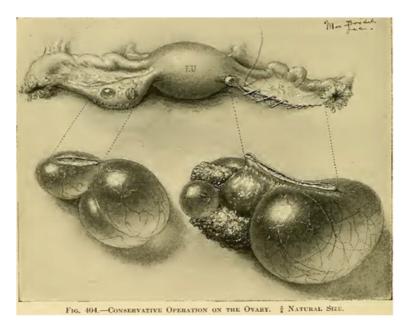


Fig. 6.3 Illustration showing the difference between conservative sectioning with preservation (left) and radical extirpation (right) of the ovary, from American surgeon Howard A. Kelly's *Operative Gynecology, vol. 2* published in 1906. This image, taken from a fairly straightforward case of enlarged cysts, belied the frequent complexities that arose in conservative surgery, particularly concerns that diseased tissue was often being inadvertently preserved (*Credit* Wellcome Collection CC BY)

Urging 'gynaecologists to give a fair and unbiased trial to the conservative surgery of the ovary', he referenced similar operations that were already being performed by surgeons in Paris and Berlin.⁶⁴ In fact, there was a striking difference between the uptake of tissue-preserving surgery in Britain compared to France, Germany and America, where by the 1890s, it had become relatively well-established.⁶⁵ This may have been in part to do with a reluctance within the British medical community to embrace fully the new understandings of ovarian physiology that were emerging, or at least, to applying them to clinical practice. Schlich has noted that despite the great interest in ovarian transplantation in

the early twentieth century, British practitioners took little interest in it, making the idea of a paradigmatic shift in practice, in the British context at least, debatable. 66 Until the 1910s, the 'internal secretions' of the ovaries were oblique enough that prominent ovariotomists remained dubious about their existence; 'there is not a particle of evidence to support this view of an internal secretion', asserted George Granville Bantock in 1903. 67 John Bland-Sutton, speaking four years later, was less dismissive, acknowledging that 'modern research tends to exalt the importance of the ovary and indicates that its ovigenous function is by no means the only duty it performs'; like Martin he believed that retaining a small piece of ovarian tissue where possible was in the interest of patients. 68 However, Bland-Sutton admitted that precisely what these secondary functions were remained mysterious and the existence of internal secretions was only 'hypothetical'. 69

It seems unlikely that surgeons were actively resisting the advance of physiology into their professional territory; plenty expressed interest in the role of internal secretions and the possible ramifications for surgery.⁷⁰ Developments in ovarian physiology, for example, were used to justify the experimental use of oöphorectomy to treat breast cancer. A procedure that stood in direct contrast to that which would be advocated by William Roger Williams a few years later (who, as discussed above, had believed removing the ovaries could cause the disease), the logic behind this procedure was distinctly physiological: if the ovaries were responsible for influential actions and secretions around the body, as well as the primary seat of reproductive action, then it seemed quite possible that they played a part in controlling physiological changes in the breast, and thus by removing the former, cancerous degeneration in the latter could be halted. There was a flurry of interest around the potentiality of the procedure before it was ultimately deemed ineffective in treating the disease.⁷¹ Nonetheless, that it occurred at all suggests that British surgeons' comparative reluctance to embrace conservative surgery was not necessarily to do with a disbelief in its physiological logic but an unwillingness to give up radical surgery regardless. The advantages of retaining ovarian tissue needed to be balanced against the risks of doing so. Extirpation of the entire ovary, if nothing else, virtually ensured that a diseased organ was obliterated; resectioning ovaries potentially meant that the pathological tissue might not be fully eradicated. The vigilant aftercare that such cases would need weighed heavily on surgeons' minds, as did the potential technical complexities of conservative surgery. Where once it

had been the removal of the ovary that had required the utmost surgical courage, it was now the choice to conserve—to run the risk of not curing or of missing diseased tissues—that called for prowess, skill and nerve; 'as experience grows no doubt conservatism will be more practised' concluded the surgeon Stanley Boyd in 1900, 'but there are some cases in which it needs a certain amount of courage to leave within the abdomen diseased structures which may prove by no means harmless'.⁷²

Despite the conversations taking place as to the varying worth of different ovarian procedures, for many patients at the turn of the century, the experience of being diagnosed and treated for ovarian disease was not hugely changed from that of patients twenty years previously. The records of the London Hospital for the first decades of the twentieth century show patterns in patient experience and presentation that had remained stubbornly unchanged; women who had suffered the slow onset of symptoms for years, before presenting with grossly diseased ovaries that had grown to huge sizes. When sixty-five-year-old Eliza Hold was brought into the London Hospital in 1900, she was found to have an ovarian cyst the 'size of a pumpkin'; not so different from the cases of patients with huge tumours which had warranted practitioners' attention back in the eighteenth century.⁷³ Patients also continued to report lengthy histories of suffering before seeking surgical treatment. The same year that Hold was treated at the London Hospital, twenty-sevenyear-old Annie Wright was also admitted to the institution, having first noticed an abdominal swelling seven years previously. She sought help only after the tumour began to increase in size and cause more pain.⁷⁴ It would be the 1930s before cases involving very large tumours became a comparative rarity, as women began to report symptoms earlier.

Patients with large tumours still mostly continued to receive 'radical' surgery in the early decades of the twentieth century; Annie Wright, as well as having her large tumour removed, also had her second ovary taken out by the surgeon after it was found to be cystic; her notes, as is so often the case, provide few clues to whether she had fully consented to the additional procedure. Records at two hospitals which retain full surgical registers support the notion that 'radical' surgery remained dominant. At the Chelsea Hospital for Women, for example, of the one hundred and eighty or so ovarian operations performed in 1912, the vast majority of these were salpingo-oöphorectomies, where the ovaries and Fallopian tubes were removed. Many more—at least a third—involved the removal of both ovaries, sometimes as part of treatment for uterine disease, in

which both the uterus and ovaries were removed. Resection, on the other hand, remained comparatively uncommon at the hospital.⁷⁵ The records for the London Hospital reveal a similar picture; general hospitals, as we have seen, tended to undertake few ovariotomies in the earlier decades of the nineteenth century, the majority being performed in private practice or in specialist hospitals. At the London Hospital, at least, it was only in the 1890s, after the panic about 'operative mania', that the operation flourished within its walls, suggesting that the Imlach affair and other controversies in fact did very little to quell the supply of or demand for ovariotomies. In 1883, just five were undertaken; in 1895, over forty ovarian operations were performed, the majority of which were described as 'ovariotomy' or 'double ovariotomy'. This was compared to approximately twenty-eight appendectomies and eleven major operations of the uterus, showing it to be by far the most common abdominal operation performed at the hospital at that time. 76 It would be the 1920s before radical ovarian surgery grew less common at the hospital—only thirteen bilateral oöphorectomies occurred in 1925, compared to 111 total hysterectomies.⁷⁷ Nonetheless operations upon the ovary were increasing as a whole, in line with other operations; altogether 114 procedures were performed upon the ovary that year. 78 Such records suggest that while the rhetoric of 'conservative' surgery was appealing to ovariotomists, in practice, radical surgery remained the favoured form of treatment for ovarian disease well into the twentieth century.

Ann Dally has characterised the 'decline' of ovariotomy at the end of the nineteenth century as intimately connected with the 'rise' of hysterectomy in the early twentieth. She has argued that hysterectomy became the new focal point for the medical profession's preoccupation with operating upon women's pelvic organs. 79 The number of hysterectomies did increase greatly during this period, eclipsing the number of ovariotomies, as the indications for removing the womb expanded and the operation became safer. But the trajectory of ovariotomy suggests a more complicated diffusion of surgical ideas and ethics than one where it was simply replaced by hysterectomy. The legacy of ovariotomy, the enduring idea that the ovaries are organs which are especially amenable to surgery, continues. Ovaries remain uncertain and dangerous entities, the treatment of which errs on the side of radical, surgical caution. Nowhere is this more apparent than in the growing management of 'precancer', a field where by far the most common and well-known procedures are prophylactic mastectomy and oöphorectomy for women with

the faulty BRCA gene, a trend Ilana Löwy has linked to 'the tradition of surgical management of gynaecological problems'. ⁸⁰ It is problematic to assume that radical ovarian surgery disappeared as surgeons' interests moved from the anatomical to the physiological, or from the ovaries to the uterus. In Britain especially, there was no neat shift from the radical to the conservative in surgery; indeed, the move towards conserving ovaries was markedly slow, despite genuine concerns about the long-term effects of removing them.

DISBELIEF AND NOSTALGIA: HOW SURGEONS USED HISTORY TO MAKE SENSE OF OVARIOTOMY

Towards the end of the nineteenth century, another type of ovariotomy was appearing regularly in the medical periodicals, alongside radical and conservative ovariotomies; an ovariotomy that was principally an historical artefact. Looking back at the past decades to assess the rapid changes that had occurred in the field, the operation began to feature heavily in the reflective narratives of doctors. The 'history' of ovariotomy was not, of course, a particularly new topic; as we have seen, priority disputes regarding the operation often took the form of historical accounts, as surgeons attempted to ascertain the order in which various developments in ovarian surgery had occurred. Establishing an historical element to the operation gave it a sense of authority and weakened its associations with the tainted notion of 'novelty'. Nor was it new that surgeons were using history in the forging of their group identity. Historical narratives were already in use as a way of making sense of the perceived 'barber to brain surgery' rise of the profession, and surgeons often used history as a tool for shaping their perceptions of themselves.⁸¹

But at the turn of the century, doctors' historicising of their recent past intensified dramatically. Surgeons were notable in their production of these narratives, using the opportunities for reflection afforded by the close of the nineteenth century. Much of their content attempted to sum up what appeared to be the considerable—perhaps incomparable—legacy that their era had bequeathed to surgery. In 1902, just before he moved to London from Leeds, where he had been learning, teaching and practising surgery for over thirty years, the abdominal surgeon Arthur Mayo Robson delivered an opening speech to new students of his alma mater, the Leeds School of Medicine, that exemplified this historicising impulse.

Addressing a mixed sex crowd—a new characteristic of many early twentieth-century medical schools—Robson chose as his topic 'the Advance in Surgery during 30 Years':

In comparing the present with the past of medicine and surgery and in attempting to forecast the future I have the advantage of being able from my own experience to contrast the work of 1870 with that of 1902. During that interval of 32 years so great have been the changes and so marked have been the advances that one cannot but feel a profound sense of gratitude that it has fallen to our lot to have lived and worked through this important period in the world's history and to have contributed in however so small a degree to the reformation which has occurred in our noble profession.⁸²

Robson imagined himself as living history, connecting his own long career with the profound changes that had occurred. He intimated that the impact of medical and surgical advance over the past thirty years went far beyond the professional world but was part of the monumental societal and technological changes that had occurred during the late nineteenth century on a global scale. In a manner which echoed the sentiments of many of his fellow surgeons, Mayo Robson declared the nineteenth century to have been 'the surgical century'.83 Ovariotomy was hugely important to these accounts. Like antisepsis it was symbolic of the progress that had been made in surgical practice. But perhaps even more than the former, ovariotomy signalled an image of Britain as the producer of robustly utilitarian innovations, its success clearly measurable through the publication of thousands of successful cases where patients had been cured from debilitating disease. It demonstrated Britain's prowess in the development of new, practical inventions, contributing to a group identity among the nation's doctors that they were, if not leaders in scientific research, the mantle of which lay with continental Europe, nonetheless at the vanguard of practical medicine, and who at the ground level of the doctor-patient encounter, were fixing bodies and saving people's lives.84

Progress was so great that it made the anxieties surrounding the operation earlier in the century seem almost inconceivable; 'the younger generation of to-day could not realise the wonder which a successful case of ovariotomy then excited or the dread of opening the peritoneal sac', reflected one gynaecologist in 1906, looking back on his student days forty years previously.⁸⁵ This powerful sense

of disbelief at the past—disbelief at what had come before changes like ovariotomy and antiseptics, as well as disbelief at those who had stood in the way of what was now conceived of as progress—coloured much of this rhetoric. 'Can we to-day believe', commented the physician Lionel Weatherly in an address to the Bristol branch of the BMA in 1898, in a reference to the old pejorative used to describe ovariotomists, 'that it was only a comparatively short time ago that the benches of the Royal Medical and Chirurgical Society rang with excited cries of "Down with the belly-rippers!" Weatherly's words evoked an almost unimaginable era—yet one only fifty years before—in which ovariotomy was castigated rather than celebrated. Surgery of the past came to function as a convenient straw man for narratives of progress, serving to build a subtle distinction between two generations of surgeons.⁸⁷

Reinforcing this was a frequent recourse to envisioning how doctors from other eras would experience the surgical present.⁸⁸ Imagining both how those from the past and the future would experience the Victorian era was a common literary device during this time and played an important role in defining what, exactly, 'Victorian' constituted.⁸⁹ These accounts are at once insightful and curious in their shifting of surgeons across time. In a talk given by the abdominal surgeon James Greig Smith in 1894, the mid-century surgeon and ardent opponent of ovariotomy Robert Liston was relocated to the 1890s. Smith imagined Liston would have 'revelled in all our "otomies," "ectomies" and "ostomies" of today!'-this despite Liston's fierce opposition to the most well-known 'otomy' of them all. 90 Liston was cast as a victim of the circumstances of his time, rather than a contributor towards those circumstances. Another interesting account which employed a temporal shift came in the form of a speech delivered by the physician James Lindsay on the penultimate day of the nineteenth century. Lindsay played upon the turning year to imagine the sparse medical world of his counterpart of 1799:

He knew of the virtues of opium and quinine, of iron and mercury, but he had never heard of digitalis, or of salicin or of cocaine. He knew almost nothing of the physiology of the nervous system and had never heard of reflex action or of cortical centres. He had never counted the corpuscles in his own blood or seen a radiogram of his own vertebral column. He probably regarded ovariotomy as criminal.⁹¹

Lindsay's words are interesting in regard to ovariotomy. While he mainly describes therapeutics and practices that were yet to be discovered or invented, with ovariotomy, he imagined instead an innovation already in existence but with criminal connotations. Extirpation of the ovary had of course been suggested by 1799, but the operation was not well-known, and certainly not by the name 'ovariotomy', suggesting that Lindsay's reference to ovariotomy in this context was in part for the dramatic effect of imagining a distant past where removing ovaries would have been considered murderous. Unlike the other innovations mentioned, it was not a question of that which was 'waiting' to be understood or discovered, but one which remained morally dubious until it was perfected by the Victorians. This aspect was hugely important to the historicisation of ovariotomy; perhaps even more important than the intellectual victory of technically perfecting the procedure.

Looking back, these narratives can seem triumphant, whiggish and perhaps a little bit silly; they are often taken as evidence of the limited powers of Victorian surgeons for a robust and honest assessment of their practices—at least in public. Certainly, these narratives clearly had a role to play in boosting the self-confidence of surgeons and providing a spirited rallying call to a younger generation—it is no coincidence that many of the speeches were given in front of crowds of medical students—as well as to provide a metaphorical pat on the back to those surgeons who had dared to innovate; similar rhetoric has been important to many group identities, regardless of profession, cause or time period. But as various historians have delineated, these narratives were by no means unmitigated celebrations; for surgeons they were an important way, perhaps the most important way, through which to understand the immense changes that had occurred in their field.⁹² Looking back enabled them to look forward and inward too; what they found was not always a cause for optimism. Surgeons' intense retrospection around the turn of the century was characterised by fear, pessimism and nostalgia as much as it was progress and advance. The culture of triumphant histories of the era and celebratory accounts of individual surgeons who had been part of it often caused unease as the two melded together to an uncomfortably close degree. As one American surgeon privately complained to his British counterpart D'Arcy Power in 1926, upon a public celebration in his honour, 'these are trying occasions; more especially when one has to speak after hearing his obituary and is actually buried,—even though it

be under a bank of flowers'. 93 As a collective, the production of historical narratives read as an obituary to an age gone by.

The sense of fractured endings and doubtful beginnings which characterised the Victorian fin de siècle percolated into surgery. The feeling of many was that surgical innovation was beginning to dwindle, or at least, was not occurring at the startling pace that it had been in the previous few decades; '[the] wave of progress has largely spent itself, or reached its full height', opined the Lancet in 1891.94 This idea had been gaining momentum since the late 1880s, most famously encapsulated in a speech given by John Erichsen, surgeon at University College London, in 1886. 'That the final limits of surgery have been reached in the direction of all that is manipulative and mechanical there can be little doubt' Erichsen argued, noting as John Halliday Croom did ten years later, that ovariotomy had reached 'perfection'. 95 Erichsen did not go as far as to suggest that surgery had reached its most advanced state but that surgical technique at least could not be improved upon, having reached a state of accomplishment through the vast array of operations now performed and which collectively made the human body in its entirety surgical territory. 96 Erichsen's comments hinted at the dying embers of an unprecedented era of surgery—which ovariotomy was symbolic of—where new operations for each internal organ had represented the inching grasp of surgical hands. It was difficult for surgeons to look beyond the survival rates for each of these operations to ascertain where surgery could possibly go from there. Writing in 1888, Bristol surgeon James Greig Smith cited Thomas Keith's achievement of a two per cent mortality in ovariotomy as the pinnacle of surgical achievement; 'surely this is the ne plus ultra, not only of abdominal surgery but of all surgery' Smith wrote.⁹⁷ The idea that surgical innovation had peaked, or that it would have to be completely reconceptualised to continue, undermined more optimistic rhetoric which imagined the progress of surgery as one of steady and continual advance. As Erichsen saw it, future generations of surgeons would have to be content with being mere imitators of his generation. 98

Not everyone agreed with Erichsen's position.⁹⁹ Well into his sixties when he made his speech, Erichsen's perspective was that of one coming to the end of his professional life, which, chronologically speaking, was closely aligned with the period of highly visible surgical success that was passing; younger surgeons were unlikely to have viewed the future in such stark terms. Nonetheless the idea rippled through

the profession; if surgeons had perfected the manual techniques of their craft, what was left to do that was original? Advances in physiology and bacteriology, the latter signalled most remarkably by Robert Koch's discovery of the tubercle bacillus in 1882, might initiate a new phase of surgery, but any innovations in the field would be increasingly reliant on medical knowledge and rather less on surgical skill. This set apart any forthcoming advances from the high era of 1880s surgery, during which many surgeons had seemed almost entirely independent from their physician counterparts, their work based on a 'surgical' rationale of local pathology. By this logic, Arthur Mayo Robson predicted, while the nineteenth century was the 'surgical century', the twentieth would be the medical one. 100

The changes afoot influenced surgeons' identity. As much as ovariotomy called upon particular conceptions of femininity, it was built upon notions of masculinity too. Victorian surgeons aspired to being gentlemen and scientists while retaining a strong masculine identity, which relied on 'physical endurance, courage, solidity and honesty'. 101 Ovariotomy had fulfilled the multiple demands upon surgeons' complex selfhood: while the operation was not always technically complicated, it was physically and emotionally demanding, its performance requiring strength of body and mind, as both medical and moral challenges presented themselves with each case. What had previously been considered the reckless bravado of ovariotomists in the mid-century had, by the 1880s, been re-imagined as heroic behaviour in the face of female suffering. Thomas Spencer Wells recalled in 1884 his thoughts about continuing with ovariotomy after his first attempt in 1858 had ended in the death of the patient, revealing that the fatality had led him to 'fear that I might be entering upon a path which would lead rather to an unenviable notoriety than to a sound professional reputation'. Wells went on, 'if I had not seen increasing numbers of poor women hopelessly suffering, almost longing for death, anxious for relief at any risk, I should probably have acquiesced in the general conviction...rather than have hazarded anything more in the way of ovariotomy'. 102 An increase in surgery based on physiology and technical conservatism suggested an identity more in line with surgeons' understandings of themselves as scientists; but it was, perhaps, at the cost of the courageous qualities demonstrated by surgeons like Wells. Now that manual skill, stamina and physical strength appeared to be of diminishing importance, some expressed serious concerns as to how this would impact on the type of person who

would be attracted to the profession. In 1892, the St. Thomas's Hospital Gazette, the hospital's in-house magazine for staff and students, used the death of the hospital's high-ranking surgeon Frederick Le Gros Clark to lament that 'in these days of Chloroform and bloodless surgery, when time, though more precious in every other department, can yet be more lavishly expended at the operating table, almost any "pudding headed, leaden hearted man" (to use a Carlyian epithet) can if he acquired sufficient technical knowledge, operate successfully, nay more guarded and defended by Antiseptics'. 103 The entry of women into medicine in the late 1860s likely played implicitly into narratives centred upon a decline in physical prowess. The question of whether women had the strength of body and mind to perform medicine, and especially surgery, with its demand on manual skill and emotional resilience, was often at the crux of debates about the justifiability of their place within the medical world. As Claire Brock has discussed, while by the 1890s female medical practitioners had begun to assimilate into varying sectors of the profession, surgery was still considered an inappropriate practice for women, and the Royal College of Surgeons of England continued to bar women from its ranks. A small pool of women, including the first female practitioner to qualify in Britain, Elizabeth Garrett Anderson, did perform ovariotomy during the nineteenth century in Britain, but, as Brock notes, the operation similarly raised questions around self-identity for female surgeons as it did their male counterparts. Those such as Garrett Anderson who performed the operation received criticism from female colleagues for seemingly aping the self-glorification of male surgeons, by participating in a culture of excessive gynaecological surgery. 104

The *Gazette's* opinion on the impact of antiseptics upon the quality of surgeons also highlighted the continued, complicated relationship between ovariotomy and antisepsis. Surgeons turned to history to elucidate the connections between what were perhaps the two greatest surgical successes of the second half of the nineteenth century. But accounts differed as to how exactly they interrelated. Some surgeons gave pride of place to advancements in scientific knowledge when historicising surgical innovation, primarily by lauding the achievements of Joseph Lister. ¹⁰⁵ In these, ovariotomy—or at least the success of ovariotomy—was carefully reconfigured as the product of broader changes in surgery, rather than an innovation itself. Arthur Mayo Robson's speech in 1903 to the British Medical Association, which reflected upon surgery since 1870, centred upon the notion that antiseptics had liberated surgery from

many of its ills, saving 'more lives each year than Napoleon destroyed in all his wars'. 106 Robson disregarded almost entirely any developments in abdominal surgery before this date, claiming that 'surgery had then no business inside the abdomen'. 107 The appeal of such a narrative was that it prioritised the all-encompassing and scientifically theorised innovation of antisepsis over the practical, manual work of operative surgery. Together with the reification of Joseph Lister the individual—by the end of the century a peer of the realm and the embodiment of the gentleman-surgeon—the 'rise' of antiseptics was a hugely appealing grand narrative. At the turn of the century, Lister's successes and popular public image were a vital constituent of the profession's projection of itself. 108

Yet for those more personally invested in ovariotomy, a historical stocktake of the operation also allowed for quite the opposite—to conceptualise the operation as an innovation which ran independently of other developments. Thomas Spencer Wells' historical account of ovariotomy, written in 1884, had the operation at the centre of its narrative:

One hundred years ago, it was but a germ that might be described in a lecture by John Hunter. Ten years later, it was seed that fell from the hand of Bell. In little more than another decade it germinated as a living vitalising reality in Kentucky. Sixty years ago, it was transplanted to the land of its philosophical conception. In twenty years more we find it a sapling on English soil, growing slowly at first, and up to 1858 looking as if it might prove no more than a withering gourd. But by 1865, its root had struck firm, its stem stood erect, its branches were wide and strong, known and sought as a refuge by the sick and dying. That it was no withering gourd has been proved by all that the world has since seen. 109

Indeed, throughout Wells' entire piece on the history of ovariotomy, he made little reference to the effects of anaesthesia and antiseptics on the operation. In line with many ovariotomists, Wells tended to view these developments as reinforcements to the advance of ovariotomy rather than its cause—something which perhaps tied in with the scepticism of many late-century ovariotomists about the benefits of the Listerian system of surgery. Robson's and Wells' contrasting viewpoints attest to the flexibility already apparent in the historicisation of ovariotomy by the turn of the century. For some, the success of the operation was simply the product of 'greater' innovations like antiseptics. But for others, the decisive and practical success of the operation made it alone an ideal symbol of recent surgical progress.

Conclusion

In surgery, where the physical performance of the operation takes centre stage, the role of language remains under-explored and under-estimated. But during the late nineteenth century, surgical taxonomy came to the fore amid changing conceptions of ovariotomy. 'Ovariotomy' had an increasingly vague definition; the variety of meanings attached to the term by the early twentieth century attest to the conceptual elasticity underlying it. This elasticity precludes any kind of simplistic picture of the operation's conclusive acceptance or rejection. Ovariotomy, insofar as it was understood to constitute radical ovarian surgery, began to experience a degree of decline in the 1920s, as did use of the term; but in Britain a shift towards more conservative measures was both slow and incomplete, despite changing ideas in physiology which seemed to confirm that removing the ovaries could have implications for the patient's health. These risks had to be carefully weighed against the opposing risk of retaining diseased ovarian tissue within the body.

At the turn of the century, the ways in which ovariotomy related to the past, present and future of surgery were widely discussed among doctors. At this time, ovariotomy still continued to be practised. But contemporaneously, it was also becoming an historical phenomenon. This played out in dual ways. The passage of time and the operation's vastly diminished mortality rate gave scope for surgeons to perform wide-scale follow-ups to their cases and ask questions concerning its impact previously considered of secondary importance to the business of ensuring the patient's survival. The foundational work of Arthur Giles, assessing the impact of abdominal operations on hundreds of his patients, marked out a transitional moment. His work allayed certain fears about the detrimental effects of ovariotomy upon mental and physical health. But Giles' account also gave a platform to patients' narratives of postoperative experience, some of which were characterised by disappointing results, highlighting a lack of congruity between the operation's reputation as a quick fix for chronic disease and the reality of some women's experiences.

The historicisation of the procedure played out on a more explicitly cultural level too, as it was transformed into an artefact of the passing Victorian era. Should these histories be considered merely triumphant and 'whiggish'? Certainly, they could be both those things. Speeches like John Erichsen's on the 'finality' of operative surgery and the 'perfection'

of ovariotomy seem to betray the worst excesses of laudatory nineteenth-century history, buttressing a story of surgery in which continual advance peaked in the hands of Victorian surgeons. But to say the function of these narratives was merely to be self-congratulatory is rather limiting. The historical narrative crafted around the operation was as much a part of the innovation process as technical developments; it allowed surgeons to shape the lineage of the operation, define its meaning and make sense of the mixture of jubilation, anxiety, disbelief and nostalgia that its success precipitated. Deriding as simplistic the use of history in this way does little justice to what was playing out; as historian William Cronon has advised when dealing with 'progressivist' histories of the past, 'we still cannot evade the storytelling task of distilling history's meaning'. 110 The historicisation of ovariotomy encapsulated the struggles to define a surgical age that was passing, of which the operation had become emblematic.

Notes

- 1. John Halliday Croom, 'Obstetrics', Lancet 148, no. 3805 (1 August 1896): 343.
- 2. Thomas Spencer Wells, 'The Address in Surgery', Lancet 110, no. 2815 (1877): 193.
- 3. John V. Pickstone, 'Medical History as a Way of Life', Social History of Medicine 18, no. 2 (2005): 310; Frank Huisman and John Harley Warner, 'Medical Histories', in Locating Medical History: The Stories and Their Meanings, ed. Frank Huisman and John Harley Warner (Baltimore and London: The Johns Hopkins University Press, 2004), 11.
- 4. Huisman and Warner, 'Medical Histories', 2.
- 5. Ann Dally, Women Under the Knife: A History of Surgery (London: Hutchinson Radius, 1991), 210.
- 6. Ornella Moscucci, The Science of Woman: Gynaecology and Gender in England 1800-1929 (Cambridge University Press, 1990), 181-184.
- 7. Moscucci, The Science of Woman, 164.
- 8. Lawrence D. Longo, 'The Rise and Fall of Battey's Operation: A Fashion in Surgery', Bulletin of the History of Medicine 53, no. 2 (1979): 265; Regina Morantz-Sanchez, Conduct Unbecoming of a Woman: Medicine on Trial in Turn-of-the-Century Brooklyn (Oxford: Oxford University Press, 1999), 110.
- 9. Sally Wilde, The History of Surgery: Trust, Patient Autonomy, Medical Dominance and Australian Surgery, 1890-1940 (Byron Bay: Finesse Press, 2010), 61.

- 10. This was the common name for nephroptosis, a condition which sees the kidney detach from surrounding connective tissues and sink down into the pelvis.
- 11. S.J. Srirangam, et al., 'Nephroptosis: Seriously Misunderstood?' *BJU International* 103, no. 3 (2009): 296–230.
- 12. John Bland-Sutton and Arthur Giles, *Diseases of Women: A Handbook for Students and Practitioners* (Philadelphia: W. B. Saunders, 1897), 387. 'Parovarium' refers to a group of small ducts located next to the ovary.
- 13. George Comyns Berkeley and Victor Bonney, *A Textbook of Gynaecological Surgery* (London: Cassell & Company, 1911), 452.
- 14. Sally Wilde and Geoffrey Hirst, 'Learning from Mistakes: Early Twentieth-Century Surgical Practice', *Journal of the History of Medicine and Allied Sciences* 64, no. 1 (2009): 67.
- 15. Charles Jennings, 'Nomenclature for Operations Upon the Ovaries', British Medical Journal 2, no. 1331 (3 July 1886): 49.
- 16. 'F.R.C.S.', 'Nomenclature for Operations Upon the Ovary', *British Medical Journal* 2, no. 1334 (24 July 1886): 187.
- 17. John Bland-Sutton, *Tumours, Innocent and Malignant* (London: Cassell & Company, 1906), 478.
- 18. 'F.R.C.S.', 187.
- 19. Herbert R. Spencer, 'A Review of 658 Ovariotomies', *Proceedings of the Royal Society of Medicine* 26, no. 11 (1933): 1435.
- 20. 'H.E.M.', 'Medical Nomenclature', Canadian Medical Association Journal 43, no. 6 (1940): 597–598.
- 21. Stuart Hall, 'The Work of Representation', in *Representation: Cultural Representations and Signifying Practices*, ed. Stuart Hall (Milton Keynes: Open University, 1997): 33. The term 'ovariotomy' is occasionally used by medical researchers in China and India. Recent examples include: Xin Zhao et al, 'Ovariotomy and persistent pain affect long-term Fos expression in spinal cord', *Neuroscience Letters* 375, no. 3 (2005): 165–169, and B. Chakrabarti and N. Mondal, 'Adolescent Ovarian Malignancy', *International Journal of Gynecology and Obstetrics* 107, Supplement 2 (2009): S138.
- 22. Charles H.F. Routh, 'The Conservative Treatment of Disease of the Uterine Appendages', *British Gynaecological Journal* 10 (1894): 59.
- 23. Lockhart-Mummery commented that 'the after-treatment of operation cases is a subject of such importance that it is not a little surprising to find how little has hitherto been written about it. What has been written is to be found, for the most part, in a somewhat fragmentary form in the larger text books'. J.P. Lockhart-Mummery, *The After-Treatment of Operations: A Manual for Practitioners and House Surgeons* (London: Baillière, Tindall & Cox, 1903), v.

- 24. Thomas Schlich, Surgery, Science and Industry: A Revolution in Fracture Care, 1950s–1980s (Basingstoke: Palgrave Macmillan, 2002), 12.
- 25. Marguerite W. Dupree, 'Other Than Healing: Medical Practitioners and the Business of Life Assurance During the Nineteenth and the Early Twentieth Centuries', Social History of Medicine 10, no. 1 (1997):
- 26. Alfred Pearce Gould, The Influence of Surgical Operations upon the Expectation of Life (Lecture for the Life Assurance Medical Officers' Association, C.E. Gray: London, 1906), 102-103.
- 27. Gould was himself a cancer specialist.
- 28. Ornella Moscucci, 'Gender and Cancer in Britain, 1860-1910: The Emergence of Cancer as a Public Health Concern', American Journal of Public Health 95, no. 8 (2005): 1319.
- 29. Ornella Moscucci, Gender and Cancer in England, 1860-1948 (Basingstoke: Palgrave Macmillan, 2017), 2.
- 30. Moscucci, Gender and Cancer, 34.
- 31. Patricia Jasen 'Breast Cancer and the Language of Risk, 1750-1950', Social History of Medicine 15, no. 1 (2002): 3; James T. Patterson, The Dread Disease: Cancer and Modern American Culture (Cambridge and London: Harvard University Press, 1987), 13-26. In 1895, abdominal surgeon Arthur Mayo Robson described one of the causes of cancer as 'senility and decadence of tissues which have passed the period of their usefulness and are about to undergo physiological rest'. Arthur Mayo Robson, 'The Bradshaw Lecture on the Treatment of Cancer', British Medical Journal 2, no. 2292 (3 December 1904): 1501.
- 32. Ilana Löwy, "Because of Their Praiseworthy Modesty, They Consult Too Late": Regime of Hope and Cancer of the Womb, 1800-1910', Bulletin of the History of Medicine 85, no. 3 (2010): 368-371.
- 33. This was principally to do with the introduction of 'Wertheim's Hysterectomy' into practice to treat cancer of the cervix. Pioneered by Austrian gynaecologist Ernst Wertheim, the operation involved the removal of the entire womb as well as surrounding cellular tissue and lymph nodes. By 1905, Wertheim could claim that thirty per cent of his cases were free from recurrence five years later. Ornella Moscucci, "The 'Ineffable Freemasonry of Sex": Feminist Surgeons and the Establishment of Radiotherapy in Early Twentieth-Century Britain', Bulletin of the History of Medicine 81, no. 1 (2007): 142-145.
- 34. Berkeley and Bonney, A Textbook of Gynaecological Surgery, 452.
- 35. Arthur E. Giles, 'Meditation on 1000 Consecutive Abdominal Operations at the Prince of Wales's General Hospital, Tottenham', Lancet 184, no. 4740 (4 July 1914): 9.

- 36. Patricia Jasen, 'From the "Silent Killer" to the "Whispering Disease": Ovarian Cancer and the Uses of Metaphor', *Medical History* 53, no. 4 (2009): 495–496.
- 37. In the late eighteenth century, the Middlesex Hospital opened the first dedicated ward for cancer patients, going on to become a leading institution in cancer research; for a detailed account of this see R.S. Handley, 'Gordon-Taylor, Breast Cancer and the Middlesex Hospital', *Annals of the Royal College of Surgeons of England* 49, no. 3 (1971): 153–159.
- 38. Roger W. Williams, 'Some Reasons for Believing That Oophorectomy Tends to Favour Rather Than to Prevent the Development of Cancer', *British Medical Journal* 2, no. 2081 (17 November 1900): 1472.
- 39. By 1902, Williams had begun to suspect that radical operations on the uterus could have a similar effect. Roger W. Williams, 'Correspondence', *British Medical Journal* 1, no. 2141 (11 January 1902): 111.
- 40. John Halliday Croom, 'Edinburgh Obstetrical Society: Psychoses Following Pelvi-Abdominal Operations', Lancet 157, no. 4044 (2 March 1901): 517; A.C. Butler-Smythe, 'Acute Mania Following Rupture of the Rectum by Enema Thirteen Days After Ovariotomy. Recovery', Journal of Mental Science 39, no. 166 (1893) 395–396; C.T. Dent, 'Insanity Following Surgical Operations', British Journal of Psychiatry 35, no. 149 (1889): 12.
- 41. Edward Tilt, *The Change of Life in Health and Disease* (Philadelphia: P. Blakiston, Son & Co, 1882): 103–132. The Edinburgh gynaecologist John Halliday Croom argued in 1901 that by removing the ovaries 'for disease or other cause, one placed the woman in all the possible risks of climacteric trouble', John Halliday Croom, 'Edinburgh Obstetrical Society: Psychoses Following Pelvi-Abdominal Operations', *Lancet* 157, no. 4044 (2 March 1901): 517.
- 42. Gould, 'Surgical Operations and Life Assurance', 106. Gould does not specify as to whether he means 'castration' of men, but it seems probable.
- 43. This was particularly the case in abdominal surgery, seen in the work of Britain's leading surgeon in the field in the 1920s, Berkeley Moynihan. Moynihan espoused a view of surgery as 'the pathology of the living', a way to collect data on internal disease. Writing on his practice of gastro-enterostomy (the surgical creation of a connection between the stomach and jejunum) he advocated the long-term follow-up of cases. In 1910, Moynihan wrote that 'we are all accustomed to be asked by the relatives of patients who are interviewed when an operation is immediately over, whether the operation has been "successful". That is

- a question which may be answered satisfactorily only after the lapse of many months. In an operation of the severity of gastro-enterostomy an operation, moreover, by which certain physiological principles seem to be set at naught—the lapse of two years is certainly not too much to allow us to speak with confidence as to its success'. Berkeley Moynihan, The Pathology of the Living and Other Essays (Philadelphia and London: W.B. Saunders Company, 1910), 82.
- 44. Arthur E. Giles, A Study of the After-Results of Abdominal Operations on the Pelvic Organs: Based on a Series of 1000 Consecutive Cases (London: Baillière, Tindall and Cox, 1910), 5.
- 45. Berkeley and Bonney, A Textbook of Gynaecological Surgery, 701.
- 46. Berkeley and Bonney claimed that patients, once they became outpatients, retained little interest in staying in contact with a hospital, or with their surgeon, unless the operation had not fully restored their health. Participating in follow-ups could also be timely and expensive for the patient, and thus an unappealing prospect for all but a self-selecting few; Berkeley and Bonney, A Textbook of Gynaecological Surgery, 700.
- 47. 'Reviews and Notices of Books: A Study of the After-Results of Abdominal Operations', Lancet 177, no. 4562 (4 February 1911): 310.
- 48. Arthur E. Giles, 'Address in Surgery', Canadian Medical Association Journal 2, no. 9 (1912): 760.
- 49. See for example the report published by the anaesthetist to the New Hospital for Women, May Thorne. May Thorne, 'After-Effects of Abdominal Section', British Medical Journal 1, 1988 (4 February 1899), 264–265. As also discussed in Claire Brock, 'Risk, Responsibility and Surgery in the 1890s and Early 1900s', Medical History 57, no. 3 (2013): 330–333.
- 50. Giles, A Study of the After-Results of Abdominal Operations, 96.
- 51. Berkeley and Bonney, A Textbook of Gynaecological Surgery, 702.
- 52. Annmarie Adams and Thomas Schlich, 'Design for Control: Surgery, Science, and Space at the Royal Victoria Hospital, Montreal, 1893-1956', Medical History 50, no. 3 (2006): 313.
- 53. Regina Morantz-Sanchez, Conduct Unbecoming of a Woman: Medicine on Trial in Turn-of-the-Century Brooklyn (Oxford: Oxford University Press, 1999): 108–109.
- 54. Chandak Sengoopta, 'The Modern Ovary: Constructions, Meanings, Uses', History of Science, 38, no. 122, part 4 (2000): 442; Thomas Schlich, The Origins of Organ Transplantation: Surgery and Laboratory Science, 1880–1930 (Rochester and Woodbridge: University of Rochester Press, 2010): 85-98.
- 55. Schlich, The Origins of Organ Transplantation, 95.

- 56. Morantz-Sanchez, Conduct Unbecoming of a Woman, 110.
- 57. John Hunter's Lectures (c. 1775–1786): Western Manuscripts MS5598 (Wellcome Collection), 2; see also Stephen Jacyna, 'Physiological Principles in the Surgical Writings of John Hunter', in *Medical Theory, Surgical Practice: Studies in the History of Surgery*, ed. Christopher Lawrence (London: Routledge, 1992): 135–152.
- 58. Gert H. Brieger, 'From Conservative to Radical Surgery in Late Nineteenth-Century America', in *Medical Theory, Surgical Practice: Studies in the History of Surgery*, ed. Christopher Lawrence (London and New York: Routledge, 1992): 216.
- 59. A further intricacy was that conservative and radical techniques often converged in a surgeon's practice. Brieger cites the work of the American surgeon William S. Halsted, for example, who was prominent in the surgical community for his work at the Johns Hopkins Hospital in Baltimore during the late nineteenth and early twentieth centuries. As a general surgeon, Halsted was known for his emphasis on tissue preservation and controlling blood loss. However, he was equally well-known for pioneering radical mastectomy, which involved removing the whole breast as well adjoining muscular tissue. Brieger, 'From Conservative to Radical Surgery', 226–229. See also Jasen, 'Breast Cancer and the Language of Risk', *Social History of Medicine* 15, no. 1 (2002): 30; Terrie M. Romano, 'Halsted, William Stewart', http://www.anb.org/articles/12/12-00365.html, American National Biography Online February 2000, accessed 25 May 2013.
- 60. In Britain it was often associated with the practice and publications of King's College Hospital surgeon William Fergusson, active during the middle of the century. William Fergusson, Lectures on the Progress of Anatomy and Surgery During the Present Century (London: John Churchill and Sons, 1867), 37.
- 61. George Granville Bantock, 'The Conservative Treatment of Lesions of the Uterine Appendages', *Lancet* 162, no. 4169 (25 July 1903): 221.
- 62. Tait was involved in several libel cases and, towards the end of his life, was embroiled in a scandal when one of the nurses in his employment claimed that he had made her pregnant. He became seriously ill with renal disease and died aged fifty-four in 1899.
- 63. Christopher Martin, 'On the Conservative Surgery of the Ovary', *British Medical Journal* 2, no. 1968 (17 September 1898): 791–792.
- 64. Specifically, August Martin in Berlin and Samuel Pozzi in Paris.
- 65. For an overview of conservative surgery in America see A. Palmer Dudley, 'The Trend of Gynecologic Work To-Day', *Journal of the American Medical Association* 41, no. 25 (19 December 1903): 1527–1532; esp. 1530. Dudley gave statistics collated from the work of a

number of surgeons. Of a total of 1276 operations that were performed upon diseased ovaries, he found that 754 had been conservative (resection or puncture) and 522 were radical (removal). Like many other surgeons, Dudley saw the ovaries as more amenable than the Fallopian tubes to resection. The latter organ was thought to be liable to becoming the seat of returning disease, especially inflammatory conditions such as pyosalpinx. See also the surgeon Florence Nightingale Boyd's 1903 overview of conservative surgery which records numerous cases from France, Germany and America that had occurred in the 1890s. Boyd notes that 'when we come to enquire into the work done in this direction in Great Britain it is difficult to acquire accurate information, as so few results have been published'; Florence Nightingale Boyd, 'Conservative Surgery of the Tubes and Ovaries', *British Gynaecological Journal* 3, no. 3 (1903): 254.

- 66. Schlich, *The Origins of Organ Transplantation*, 95. For more on physiological surgery in Austria see Tatjana Buklijas, 'Surgery and National Identity in Late Nineteenth-Century Vienna', *Studies in History and Philosophy of Biological and Biomedical Sciences* 38, no. 4 (2008). Buklijas contends that a physiologically based approach to surgical practice was present in the teachings and followers of Theodor Billroth during the mid-nineteenth century, suggesting that physiological surgery was already much more well-established in central Europe than it was in Britain.
- 67. Bantock, 'The Conservative Treatment of Lesions', 221.
- 68. John Bland-Sutton, 'A Clinical Lecture on the Value and Fate of Belated Ovaries', *Medical Press and Circular* 135 (31 July 1907): 111.
- 69. Bland-Sutton, 'A Clinical Lecture', 108.
- 70. For example, the Leicester surgeon C.J. Bond conducted numerous experiments into ovarian and uterine physiology in the early 1900s. This included research studying possible compensatory hypertrophy in cases where one ovary remained after surgery. C.J. Bond, 'Some Points in Uterine and Ovarian Physiology and Pathology in Rabbits', *British Medical Journal* 2, no. 2377 (21 July 1906): 121–127.
- 71. Sengoopta, 'The Modern Ovary', 437–440. Initial experimentation with oöphorectomy in breast cancer patients in the late 1890s appeared to garner some success. In 1897, the surgeon Stanley Boyd presented five cases which he used to tentatively argue that the lives of those suffering from breast cancer might be considerably extended by treatment with oöphorectomy. However, optimism surrounding the procedure was short-lived. By the following year, experiments with the same operation by Joseph Lister's former right-hand man, William Watson Cheyne, had ended in disappointment and Cheyne reported only a brief regression

in the size of breast cancer tumours in his patients before the condition worsened once more after a short period. See Stanley Boyd, 'On Oöphorectomy in the Treatment of Breast Cancer', *British Medical Journal* 2, no. 1918 (2 October 1897): 890–896. W.W. Cheyne, 'Two Cases of Oöphorectomy for Inoperable Breast Cancer', *British Medical Journal* 1, no. 1194 (7 May 1898): 1194–1195.

- 72. Stanley Boyd, 'Conservative Surgery of Tubes and Ovaries', *British Medical Journal* 2, no. 2072 (15 September 1900): 734.
- 73. Surgical In-patients (1900), case 228 LH/M/15/4 (Royal London Hospital Archives).
- 74. Surgical In-patients (1900), case 1096 LH/M/15/4 (Royal London Hospital Archives).
- 75. Chelsea Hospital for Women—Register of Major Operations (1912) H27/CW/B/10/03/014 (London Metropolitan Archives). In cases where disease was clearly confined to one side, there seemed to be little logic in attempting to preserve part of that ovary, it being established by then that a woman's physiology or fertility should not be affected if she had one ovary remaining. See Martin, 'On the Conservative Surgery of the Ovary', 791.
- 76. Surgical Beadles Register of Operations performed (1895) LH/M/3/112 and the Surgical Index of the same year (1895) LH/M/2/1 (Royal London Hospital Archives). The nature of the records means that only approximate statistics can be given.
- 77. Obstetric and Gynaecology case indexes (1925) LH/M/2/142 (Royal London Hospital Archives).
- 78. Obstetric and Gynaecology case indexes (1925) LH/M/2/142 (Royal London Hospital Archives).
- 79. Dally, Women Under the Knife, 220.
- 80. Löwy, 'Because of Their Praiseworthy Modesty', 237.
- 81. Christopher Lawrence, for example, notes the re-configuration of anaesthesia into 'a significant historical moment' in the 1860s; Christopher Lawrence, 'Democratic, Divine and Heroic: The History and Historiography of Surgery', in *Medical Theory, Surgical Practice: Studies in the History of Surgery*, ed. Christopher Lawrence (London: Routledge, 1992): 8.
- 82. Arthur Mayo Robson, 'An Introductory Address on the Advance in Surgery During 30 Years', *Lancet* 160, no. 4127 (October 4 1902): 914.
- 83. Mayo Robson, 'An Introductory Address', 913.
- 84. Michael Worboys, 'British Medicine and Its Past at Queen Victoria's Jubilees and the 1900 Centennial', *Medical History* 45, no. 4 (2001): 472.

- 85. W. Stephenson, 'The British Association Meeting at Swansea: Obstetrics and Gynaecology', Lancet 162, no. 4170 (1 August 1903): 350.
- 86. Lionel Weatherly, 'Remarks on Medical Progress', Lancet 152, no. 3918 (1 October 1898): 853.
- 87. Lawson Tait, 'The Evolution of the Surgical Treatment of the Broad Ligament Pedicle', Lancet 147, no. 3794 (16 May 1896): Tait remarked on the 'slow and tardy' evolution of abdominal surgery, 1338.
- 88. Mayo Robson, 'An Introductory Address', 914.
- 89. Although principally looking at the ways Victorian era writers imagined how future generations would look back at them, Kelly J. Mays' analysis of this form of literary device—as a way to 'apprehend the present as a coherent "age", can be equally applied to the use of invoking figures from the past. Kelly J. Mays, 'Looking Backward, Looking Forward: The Victorians in the Rearview Mirror of Future History', Victorian Studies 53, no. 3 (2011): 453.
- 90. James Greig Smith, 'The Art of the Surgeon, and How We Train Men to Practise It', Lancet 144, no. 3701 (4 August 1894): 248.
- 91. James A. Lindsay, 'An Inaugural Address on Our Position and Outlook', Lancet 154, no. 3983 (30 December 1899): 1798.
- 92. Worboys, 'British Medicine', 473-474; Christopher Lawrence and Michael Brown, 'Quintessentially Modern Heroes: Surgeons, Explorers and Empire, c. 1840–1914', Journal of Social History 50, no. 1 (2016): 156-157.
- 93. Letter from Rudolph Matus to D'Arcy Power, Dec 31st 1926; (MS0289/6; Royal College of Surgeons of England).
- 94. 'The Annus Medicus 1891', Lancet 138, no. 3565 (26 December 1891): 1447.
- 95. John Eric Erichsen, 'An Address Delivered at the Opening of the Section of Surgery', British Medical Journal 2, no. 1337 (14 August 1886): 314.
- 96. Operations of the appendix, liver and gallbladder were relatively common by the end of the century. The brain too had become surgical territory. The surgeon Rickman Godlee, Joseph Lister's nephew, first performed an operation to remove a brain tumour in 1884. Although the procedure was ultimately unsuccessful, Godlee's attempt paved the way for the work of other surgeons, such as Victor Horsley of University College Hospital, who in the 1880s began to successfully perform brain surgery in London.
- 97. James Greig Smith, Abdominal Surgery (London and Bristol: J. & A. Churchill & J. W. Arrowsmith, 1880), 120.
- 98. Erichsen, 'An Address', 314.

- 99. Sir William Stokes, President of the Royal College of Surgeons of Ireland, described Erichsen's views, in an address to the Academy of Medicine in Ireland, as 'a dismal view of the present as well as the future'. Stokes pointed out the continued 'infancy' of brain and abdominal surgery (inferring its probable growth) as well as the developments awaiting that might enable the treatment of organs still untouched by surgeons, such as the lungs. W. Stokes, 'An Address on Finality in Surgery', *Lancet* 128, no. 3299 (20 November 1886): 961.
- 100. Robson, 'An Introductory Address', 916.
- 101. Christopher Lawrence, 'Medical Minds, Surgical Bodies', in Science Incarnate: Historical Embodiments of Natural Knowledge, ed. Christopher Lawrence and Steven Shapin (Chicago and London: University of Chicago Press, 1998), 194. See also Christopher Lawrence and Michael Brown's exploration of the analogies between explorers and surgeons and their 'shared culture of heroism and muscular masculinity'; Lawrence and Brown, 'Quintessentially Modern', 153.
- 102. Thomas Spencer Wells, 'An Inaugural Address on the Revival of Ovariotomy, and Its Influences on Modern Surgery', *Lancet* 124, no. 3193 (8 November 1884): 812.
- 103. 'Obituary of Frederick Le Gros Clark'. St. Thomas' Hospital Gazette 7, no. 2 (October 1892): 110; TH/PUB2/1 (Kings College London). See also Sally Frampton 'Applause and Amazement': Social Identity and the London Surgical Elite, 1880–1905 (MA thesis University College London, accessible from the Wellcome Library London, http://www.wellcomelibrary.org): 21–23.
- 104. Claire Brock, *British Women Surgeons and Their Patients*, 1860–1918 (Cambridge: Cambridge University Press, 2017), 7–8, 50–51. As Brock discusses, Garrett Anderson was publicly criticised by Elizabeth Blackwell, the British-born physician who was the first woman to receive a medical degree in the United States and who had returned to Britain in 1869. Blackwell spoke openly of her belief that female practitioners were equally susceptible to 'operative madness'.
- 105. Frederick Treves, 'Address in Surgery: The Surgeon in the Nineteenth Century', *Lancet* 156, no. 4014 (4 August 1900): 316.
- 106. Arthur Mayo Robson, 'Address in Surgery: Observations on the Evolution of Abdominal Surgery from Personal Reminiscences Extending Over a Third of a Century and the Performance of 2000 Operations', *Lancet* 162, no. 4170 (1 August 1903): 292.
- 107. Mayo Robson, 'Address in Surgery', 293.
- 108. Marguerite Wright Dupree, 'From Mourning to Scientific Legacy: Commemorating Lister in London and Scotland', *Notes and Records of the Royal Society* 67, no. 3 (2013): 262.

- 109. Thomas Spencer Wells, 'An Inaugural Address on the Revival of Ovariotomy, and Its Influences on Modern Surgery', *Lancet* 124, no. 3194 (15 November 1884): 857.
- 110. William Cronon, 'Two Cheers for the Whig Interpretation of History', *Perspectives on History* 50, no. 6 (2012), http://www.historians.org/perspectives/issues/2012/1209/Two-Cheers-for-the-Whig-Interpretation-of-History.cfm, accessed 6 June 2013.

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