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PERFORMING MEDICINE, PERFORMING SURGERY

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This lecture explores the idea that performance lies at the heart of clinical practice. I've been a trauma surgeon, a general practitioner and an academic and I'm fascinated with aspects of medicine that often escape attention. One of these is performance.

As a student I saw medicine as a science. As a surgeon I saw it as a skill. As a family doctor I saw it as performance. As a patient I knew it was all of those, but what I experienced was the performance. Much of this is about communication. That's how care is expressed and where important things happen, but it's also where many of the problems between doctors and patients arise. Performance is how the relationship between a clinician and a patient is expressed. It's how care itself takes place. Yet performance in medicine is under-recognised and under-acknowledged.

As a medical student, the skills of working with people are often overshadowed by the need to learn science and clinical procedures, to memorise facts about anatomy, pathology, diagnosis and treatment. The medical education system invites us to see ourselves as applied scientists more than performers. I will argue that this is a misreading of the concept of performance and that performance is always there within medicine, though we don't always recognise it.

Performance is clearly evident in the operating theatre, where a surgical team has to work together in a procedure which, once started, has to run to its conclusion. From a clinical perspective, the members of the team are applying their scientific knowledge and procedural skill to make a sick or injured person better, based on anatomical knowledge, dexterity and expert team-working. But there are other ways of looking at surgery. Artists bring a different perspective. Barbara Hepworth's Hospital Paintings from the 1940s, painted at a time when one of her children was ill with osteomyelitis, capture a sense of concentration, focus and dedication amongst the team, while showing almost no details of the procedure itself. Hepworth doesn't show *what* the clinicians are doing so much as *how* they are doing it.

Surgery as Performance

Surgery has a long history as a performative practice. The development of 'modern' surgery takes place alongside changes in many forms of performance from the eighteenth century onwards, resonating with wider social currents which we still feel today. This was evident in Britain and across Europe at a time when surgery was establishing a new identity. As one writer puts it, 'In a metaphorical sense that comes close to being literally true, [Parisian] surgeons […] may be thought of as sons of the mediaeval barber-surgeon and fathers of the modern physician-surgeon' {Gelfand 1980}. Performance in the form of demonstration - from public anatomies to operative procedures - became a key component of surgeons' claim to legitimacy as scientists as well as artisans.

Spary argues that in France especially, performance was central to the establishment of surgery as a high-status profession, a means by which surgeons navigated their new territories. She too points out that eighteenth century surgery had a strong element of spectacle, often performed before a domestic audience. Surgeons had to negotiate

the challenges of appealing to a sensation-seeking public while distancing themselves from charlatans. In her words, 'surgeons gradually came to hide the mechanism behind their operative stage even from themselves. The making invisible of the social body required to perform the operation successfully was mirrored by surgeon's claims to make visible the invisible parts of the natural body in which they operated'. A maxim of the time - that 'a true surgeon, a learned and experienced man, seeks to count his successes only by the operations he has known how to prevent' - resonates with current issues around relationships between performance and professional judgement.

In the eighteenth century, as now, surgical performance played out on multiple levels. Guerrini uses the example of Alexander Monro Primus (Professor of Anatomy at Edinburgh University) to explore the idea of the 'moral theatre of anatomy', where dissection of human cadavers and live animals took place simultaneously in front an audience for whom 'function as well as form was the object of study'. There was a tension between entertainment, instruction and clinical care. While serious themes of death, repentance and retribution were demonstrated though dissection of dead human and living animal bodies, the theatre of anatomy was also 'the ultimate entertainment […] In eighteenth-century Edinburgh, it was the best show in town'.

This provides a historical precedent for considering surgery as part of a broader performance canon, though the ambiguities of surgery (especially in terms of who is performing what, for whom and to whom, and who exactly is the audience) pose interesting challenges. The anatomical theatre in Padua, inaugurated in 1595, was designed as much for spectators as for those performing the dissections. By the 19C, public exhibitions of anatomy had developed into professional demonstrations of surgery for students and doctors. The Old Operating Theatre at St Thomas's Hospital dates from 1822 and here again there is as much emphasis on those watching the surgery as those performing it. Thomas Eakins' 1889 painting *The Agnew Clinic* shows Dr Agnew performing a partial mastectomy at the University of Pennsylvania, watched by an audience of medical students. The process continues to this day, though operating theatres are no longer designed with viewing galleries. Many surgical procedures are streamed and anyone can watch operations over the internet.

Performance and Performance Science

This talk reframes medical care, making performance the focal point and exploring how patients and clinicians interact. One problem is that medical students and doctors learn the performance aspects of medicine within the world of medicine, not within the wider world of performance. Clinical training takes place within a restrictive frame, necessary in the initial years of medical education, when students have enough on their plate learning what to know and do. But there is a tendency to stay within that frame. I will argue for recognising points of connection with domains apparently unrelated to medicine, for including experts who do similar *kinds* of thing even though their purpose and methods may be very different.

I remember starting my first major trauma operation as lead surgeon at Baragwanath, the huge hospital in Soweto, on the outskirts of Johannesburg where I spent several years during my surgical training. Soweto was one of the most violent places in the world at that time, and much of our work involved operating on patients who had been stabbed or shot. I didn't know what I'd find and I wasn't sure whether I could cope. But once I had started I forgot my anxiety. I narrowed my focus and concentrated on each part of the procedure, as I'd been taught. Afterwards I'd replay it in my head, wondering if I could have done things better. Later I discovered that this happens to many performers. But when I was starting that operation I didn't think of myself as a performer. I thought of myself as a surgeon, applying skill and scientific knowledge to make an injured person better. It never occurred to me that I could learn from musicians, potters or hair stylists.

For example, many professionals find performing stressful. Performance anxiety is a big problem for musicians. According to a survey of more than 2000 professional musicians conducted by the International Conference of Symphony and Opera Musicians, the largest sample to date, 24% suffered from stage fright, 13% reported acute anxiety and 17% reported depression. Some situations, such as solo performances, are especially stressful, though auditions come close. Yet because in medicine we don't see ourselves as performers, we seldom think what we can learn from these other fields, even though doctors and nurses often experience severe anxiety too.

I jointly lead the Royal College of Music - Imperial Centre for Performance Science, with my colleague Aaron Williamon. Aaron is a musician, psychologist and performance scientist who describes his field as a 'multidisciplinary study of human performance which draws together methodologies across numerous scientific disciples, including those of psychology, physiology, sociology, and economics, to understand the fundamental skills, mechanisms, and outcomes of performance activities and experiences'. Williamon talks of stages of performance, of 'preparation and delivery, then reflection, review and recovery'. As a surgeon I focused more on the preparation and delivery - about studying and operating - than on reflection and recovery. Yet it's often there that the most effective learning takes place.

A Trajectory of Expertise

For the purposes of this talk I consider performance as something skilled that you do for someone else. Performance may be synchronous, like a concert or a play, or asynchronous, as when a potter makes a vase that is only seen later, in a shop or exhibition. But whatever the field, expert performance requires years of hard work. The more expert the performance, the less evident that hard work becomes.

Medicine involves a particular kind of performance. Much of it is close up, taking place within each patient's personal space rather than being watched by large audiences a long way away. Many other professionals do work that involves close proximity, from dentists, opticians and beauticians to tailors, massage therapists and tattoo artists. I'm going to draw on the experiences on two of two such experts - a hairdresser and a bespoke tailor - to examine how they gained their expertise.

Fabrice has over thirty years' experience as a hair stylist and a teacher. He has been director of training at the Toni & Guy Academy and runs master classes for other specialists in his field. He has spent years distilling his knowledge and skill as he trains apprentices. Joshua is a bespoke tailor from London's Savile Row. He did two apprenticeships, first as a sewing tailor, then as a cutting tailor. Now he designs and makes suits and jackets for each of his customers. By looking at these experts and others I trace a trajectory of expertise, based on the time-honoured progression from novice to expert to teacher, from apprentice to journeyman to master, from struggling in someone else's workshop to becoming an independent expert, then leading a workshop of your own. I've broken it into six stages.

1. Doing time

As a medical student on a traditional course I spent my first three years learning anatomy, biochemistry and physiology. I hardly saw a patient. Once I began the clinical part of the course I was sent to take routine blood samples from all the patients on a pre-operative ward. The next few years were full of such tasks. At the time it seemed like repetitive work of little value to me as a student.

Fabrice experienced something similar, sweeping the floor and making tea for the clients. He gradually progressed to washing clients' hair, then using scissors and clippers. But for years he was doing boring repetitive work of no apparent value. For Joshua it was pocket flaps. He spent months learning to cut and sew them, often with little encouragement. Eventually he began to recognise when they weren't right and finally he was allowed to move on. But ever since, pocket flaps have been his shorthand for boring repetitive tasks of no apparent value.

We all chafed at having to do these repetitive tasks. But looking back, they may have been boring but they weren't of no value. They were our means of joining a community of practice, the group we aspired to be part of. And doing this work was how we learned to work with people. We became confident with entering personal space, with learning to care. In my case they were key to becoming a doctor.

2. Learning to see

In order to work with materials, you have to know how they behave. This starts with looking, something in which visual artists are trained from the outset. Drawing focuses their attention, forcing them to notice what is in front of them, not just give it a cursory glance. To create botanical illustrations, for example, the artist Brigid Edwards spends hours in front of each specimen, sinking her gaze into every detail before reproducing it through her art. Fabrice the hair stylist did something similar when he trained himself to register the nuances of hair, how it falls and how it catches the light, how it complements the shape of each person's face. Joshua the tailor had to learn this too, registering tiny details of each customer, his gait, his movements, the minute asymmetries that make each person unique. Only then could he design something that worked for that one person.

3. Coming to grips with materiality

Looking on its own is not enough. Expertise requires a subtle awareness of materials which requires prolonged engagement. I learned how to take blood by constant practice, working with patients of all ages and states of health. Fabrice learned about the different types of hair, about their textures and consistencies and how they behave when wet or dry. Joshua too had to develop an internal library of how textiles feel and behave with use and over time. For each of us, that repetition and handling, that time in the close company of materials forms the bedrock of our expertise.

A crucial ability is to recognise the limits of the materials you are working with. The ceramicist Duncan Hooson talks about 'thin materials on the verge of collapse'. For him this is about recognising the point when the neck of a vase is about to crumple under its own weight as he shapes it on his wheel. His phrase captures something that all experts recognise - the ability to recognise limits, to know how far you can go and when you need to stop. This is something textbooks cannot convey you, skills of performance that can only be learned by doing. Much of this is impossible to put into words. When an experienced surgeon shows a trainee how to remove a gallbladder by open surgery, he needs to convey the sensation of 'blunt dissection', of peeling the gallbladder off the liver with a finger. This has to be felt. It isn't something that can adequately be put into words. To understand what he means you have to do it yourself, to feel what he's feeling.

As a student, speech and writing are dominant. Lectures, books, online resources - all expressed through words. Yet medicine is about people. In clinical performance, much communication is through different channels, through gesture, touch, stance or gaze rather than words. As the GP and writer John Launer said to me recently: 'two silences can also be a conversation'. In medicine we are apt to undervalue these forms of communication. Yet these wordless ways are the currency of care. They're how we convey warmth, compassion and concern - or coldness, disdain and irritation. So it is essential that we learn how to use them. As a medical student and a doctor, you have to develop the skills of working with people at close quarters, of making them feel comfortable. This requires sensitivity and awareness, 'reading' how others experience your presence. Unless you do this people won't be satisfied, even if your technical work is excellent.

4. 'It's not about you'

I am grateful to some leading close-up magicians for highlighting this stage. Richard McDougall became obsessed with magic when he was a child and for years he practised incessantly. When he did tricks for other people he wanted to show off his skills. But after a while he realised that was the wrong focus. 'Magic is not about you, the performer', he told me, 'it's about them, the audience'. It's the performance that really matters. I think this applies to all experts. At first you want to show off your hard-won knowledge and skill. Then you realise it's actually about someone else - your patient, your customer, your client, your audience - not about you.

When I qualified as a doctor I soon learned that most patients don't care how many exams you have passed or how many facts you've memorised. They want you to help them with their problem. Fabrice and Joshua tell similar stories. With every person you work with you only use what's relevant to that person in that moment.

The nature of clinical practice entails becoming comfortable with other people's bodies. Each of us has a buffer zone of 'peripersonal space' whose boundaries are fluid and change with context. The extent of that zone varies, whether you're with family, friends or strangers. As a professional you have to enter and work within each person's invisible second skin, to 'inhabit' their personal space as you do your work. You have to tune in to their response and adjust your approach accordingly. And that takes practice. That's what I was learning, without realising it at the time, from taking blood and unblocking catheters. That's what Fabrice was learning by shampooing clients' hair and what Joshua learned from all his suit fittings.

Something similar happens in a good restaurant. In a collaboration with Heston Blumenthal's *The Fat Duck* in Bray (one of very few three Michelin starred restaurants in the UK) I have explored parallels between the restaurant's front of house team and the hospital clinic. Skilled front of house staff make every guest feel that the experience of dining is all about them. Restaurant professionals know that excellent food from the kitchen is necessary, but not on its own sufficient for a successful meal. What people remember is how the restaurant made them feel.

Expert waiters move in and out of diners' personal space without obtruding, making each guest feel looked after and at ease. Learning how to pass through that invisible second skin takes practice, observation and a lot of skill. For many people it doesn't come naturally, though it's something everyone can study and get better at. But though that shift 'from you to them' is profoundly important, it doesn't always happen. Recent cases such as Iain Paterson, the rogue surgeon who carried out hundreds of unnecessary breast operations, or Simon Bramhall who signed his patients' livers, show what can happen when this goes wrong, when experts think it's about them rather than their patients.

This shift from performer to audience raises questions about who the audience is. In many areas this is straightforward enough. At a chamber concert the musicians are on the stage and the audience are in seats, listening quietly. At first sight medicine seems similar - a doctor performing, their patient as audience. But the relationship is more complex. A GP's consultation might start with the patient presenting their problem in words, gestures and silences - in other words, performing. The doctor watches and listens, an attentive audience. Then the roles reverse. Perhaps the doctor 'performs' a physical examination, suggests a possible diagnosis. Now the doctor is performing, and the patient is the audience. Then things might switch again. A successful consultation requires performance by doctor and patient. Medical performance is a two-way street.

5. Developing 'voice'

By now we have reached the cusp between apprentice and journeyman, between following a system and branching out as an independent expert. At medical school I was taught a formula for gathering and processing information. I learned how to take a history, carry out a physical examination, make a diagnosis and propose treatments, all within a system that had developed over decades. I seemed interchangeable with any other student and it took a long time to realise that my personality was essential to my work.

The American jazz musician and family doctor Paul Haidet talks about the ability to 'drop' what you have learned formally and apply it in the moment. As a musician you spend years learning to play your instrument, practising scales and learning repertoire. But the musicians who make a mark are those who 'channel the theory, technique and ideas of their predecessors through their own personalities, feelings and experiences'. This is what jazz musicians call 'developing voice', that unique style that means you can recognise John Coltrane, Charlie Parker or Stan Getz within a few seconds.

As a GP I realised that I was not a faceless cipher, delivering what I had learned in medical school. Much of what I did depended upon my own personality, my style, my 'voice'. The reason some patients came to see me, and others came to my partners in our group practice was not so much about our knowledge as our personal style. Fabrice and Joshua use similar language when they talk about developing their individuality as a stylist or a tailor. Each of them shows how an expert professional uses their expertise in performance to create an experience for another individual.

6. Passing it on

This last stage is how experts share their expertise with less experienced performers. It's a stage that often flowers late. Although we always learn from those around us, in the later stages of expertise there are opportunities to do this more formally, to help others develop the skills that we took years to master. This doesn't happen automatically. Being an expert performer is not the same as being an expert teacher. Passing it on requires another shift 'from you to them', a change in focus that puts each learner at the centre of the picture.

Conclusion

Since my time as a student, performance has become much more prominent within medical education. Communication skills programmes have become a central part of every medical school's curriculum. Although such training is helpful, there is a danger that students can focus on techniques - for eliciting information, say, or breaking bad news - without making that crucial transition from 'thinking it's about you' to 'knowing it's about them'. It can be easier to ask a question than to listen to the answer.

A solution lies in thinking more broadly about performance. In recent decades performance science has blossomed, but because clinicians are reluctant to see themselves as performers they often miss opportunities to share their experiences with experts outside medicine or science. Yet framing one's work as performance can be very helpful.

Medicine is a complex amalgam of science, skill and performance. What we see depends on what we look for, and performance often hides in plain sight. Yet it is through performance that we experience medicine's beauty, its power and its humanity - and its darker sides of indifference or self-absorption. As a doctor, a teacher and a patient I believe that it is performance that forges the science and skill of medicine into the experience of care.

Further reading

1. My iTunes podcast series Countercurrent explores these ideas with many experts from medicine, science and the arts. http://apple.co/2n5ROy1
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