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STAYING IN TOUCH WITH PATIENTS

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This lecture explores the role of touch in clinical performance.

The theme of my Gresham lectures this year has been 'Performing medicine, performing surgery'. In Lecture One I asked what comes into view when we focus on the performance of healthcare rather than the science which underpins it. I traced a trajectory which begins with doing time, then to learning to see and coming to grips with materiality and touch - ideas I explore in more detail in this fourth lecture. In Lecture Two I was joined by the magician Will Houstoun as we unpacked the clinical consultation and explored the shift 'from you to them', from you as an expert to those your expertise is for - whether patients, audience or clients. In Lecture Three I was joined by the puppeteer Rachel Warr and her colleagues, exploring how team working lies at the heart of operative surgery. In this fourth lecture I examine the role of touch in the world of medicine - a role that is often undervalued.

Gnostic and procedural touch

As a medical student I was taught the skills of physical examination. I learned a series of steps, each with a technical name - inspection, palpation, percussion and auscultation. First you look, then you feel, then you tap and finally you listen with your stethoscope. The order was important - if you touched or listened before looking you would be pilloried by your teacher. The aim was to ensure that you took in the whole picture before narrowing down to what your hands could tell you.

I was drilled in a rigorous process for describing what I saw and felt. First, I had to teach my fingers to see, then to make sense of what they saw. After I had examined a patient, I had to present a summary to a senior doctor. I might say something like 'This 68-year-old retired schoolteacher with a three-month history of discomfort on walking has an irregular non-tender mass in the anterior thigh. The mass is 5 cm in diameter, fixed to the underlying muscle but not to the overlying skin'. Then and only then was I asked what I thought it was and what we should do about it.

Later as a doctor this diagnostic analysis had a different purpose. During a year in obstetrics I had to learn to make sense of landscapes I could not see, building a tactile picture of patient and her baby by what my fingers could tell me as I conducted an internal examination, perhaps deciding to use forceps to complete a delivery. Later, as a surgeon, my decision to operate or intervene was also shaped by that sense of touch. A patient's rigid abdomen, a palpable tumour that needed to be excised, a tender fluctuant abscess to be drained - all these were about *gnostic* touch, about gaining information about what was wrong.

As a surgeon I relied on touch not only to diagnose disease and decide whether to operate, but when I was performing surgery. In the operating theatre I relied upon this *procedural* touch, the ability to 'read' living human organs as I cut and shaped them, to recognise how they responded and behaved. I had to learn what 'normal' felt like and what was diseased or injured. I populated my memory with every kind of touch. Almost all surgery at that time was 'open'. With the patient under general anesthetic, an incision would allow you to see internal organs directly, to touch and manipulate them, to remove and rejoin structures under direct vision using direct touch. During operations I would manipulate internal organs, register their consistency and texture, make judgements about their state of health. I learned not only what the liver and the colon felt like, but their variety in health and disease. I learned the limits of living tissue; how gentle I should be and how firm. I learned how to recognise what the textile artist Fleur Oakes describes as 'wrongness', that instinctive understanding that something is abnormal without being able to say exactly why. For among the many extraordinary capacities of the hand is its ability to feel and do at the same time, to integrate sensing with responding.



I learned things that could not easily be put into words. This inability to express sensation verbally is a challenge. Later in my career I saw a senior surgeon explaining to a junior colleague how to remove the gallbladder from the liver bed. 'You put your finger in here', he explained, 'and just feel the ...'. At that point his voice trailed away, as he reached the limit of what words could convey. He was trying to communicate a feeling, a sensation, and that can only be experienced through touch.

Pathic touch

It is easy to overlook the two-way nature of touch. When I was examining my patients as a medical student, my focus was on the information I was gathering and the challenges of presenting that to my consultant. But all that time I was communicating too, though often without realising it. When I examined a patient's knee, took their blood, checked how labour was progressing, monitored a wound as it healed - none of this was a one-way process. My patients were interpreting my touch and responding to me as a person, not just a diagnostic machine. When I became a general practitioner much later in my career, this became even more important. I realised that there was a language of touch which went beyond the gathering of diagnostic information, or which was embedded within it. That was the power of touch to convey intention, respect, sensitivity - to convey care. This is what the phenomenologist van Manen describes as 'pathic touch'. Its existence and its power are often overlooked. This kind of touch is not unique to the clinical professions. It has characteristics in common with other kinds of touch. This can sometimes cause confusion. The phenomenologist Max Van Manen puts it like this.

'Of course, a gnostic-pathic ambiguity can arise in many professional and social situations. For example, the physiotherapist may manipulate or massage the patient's body with gnostic intent while the patient would say that the treatment has the quality of a pathic experience. Many medical procedures that are primarily technical may give the patient a pathic trust in the physician, especially if the quality of the relation between patient and doctor is personal.'

'What then makes pathic practice distinct? The difference is this: pathic thought turns itself immediately and directly to the person himself or herself. A pathic relation is always specific and unique. Even a relatively brief encounter between a patient and a health care provider can have this personal quality. A personal relation is something you can have only with a specific other. The pathic orientation meets this concrete person in the heart of his or her existence, without trying to reduce the patient to a diagnostic picture, a certain kind of case, a preconceived category of patient, a psychological type, a set of factors on a scale, or a theoretical classification. In other words, there is something deeply personal or intersubjective to the pathic relation. That is also the reason that the pathic personal relation is easily confused with the private one.'

In an earlier lecture I pointed out a transition during the journey of expertise. In the words of a magician I've been working with, professionals have to learn that 'it's not about *you* (the performer or clinician), it's about *them* (the audience, patient or client)'. The purpose of clinical touch is to do something for another person, to integrate the gnostic, the procedural and the pathic. That entails understanding the impact of clinical touch on the people you are caring for and learning the two-way language of touch.

Becoming fluent in the language of touch is not straightforward. At times it can be very challenging. For me, those years as a medical student, a junior doctor, a surgeon and a GP were where I learned that language. It was through that constant repetition, those endless physical examinations, those mornings taking blood, that continual contact with people's bodies that I gained a confidence in the language of touch. I learned to gauge what kind of touch my patients would find most helpful. I might put my hand on someone's shoulder if they were upset, squeeze an elderly lady's hand when she was frightened. In one sense this seems obvious. Nurses, physiotherapists, massage therapists, carers and others have known this since time immemorial. For many clinicians this is a language that must be learned.

The changing languages of touch

Now things are changing. In many parts of the world, including the UK, the role of gnostic touch has been transformed. In the decades since I was a medical student, advances in imaging technology have revolutionised physical diagnosis. These techniques are providing undreamed of detail and anatomical precision. CT, MRI and ultrasound seem to marginalise the need for palpation, for diagnosis through touch. Medical students no longer see a need for the discipline of being able to say, 'an irregular non-tender mass 5 cm in diameter in the anterior abdominal wall, fixed to the underlying muscle, not tender or fluctuant'. Instead they point to an image which shows them everything they need to know - or seems to. The eyes of touch are being outsourced to technology. Procedural touch is changing too. When keyhole surgery was introduced in the 1980s the balance between vision



and touch was radically altered. Magnified images through telescopic cameras showed internal organs in unprecedented detail, but surgeons' sense of touch was blunted through operating at one remove using rigid instruments that muffled their haptic sense. Many procedures are now done by interventional radiology, where specialists manipulate tiny wires through the vascular system, requiring a new balance between vision and touch. Robot-assisted surgery changed that balance even further, and the early robots abolished the sense of touch almost completely.

The pace of technological change is dizzying. I was in the operating theatre when Professor Darzi (now Lord Darzi) performed the first robot-assisted laparoscopic cholecystectomy in 2000. Last year that same robot entered the Science Museum as an accession. In less than twenty years, a technology that seemed unimaginably futuristic has become a museum exhibit. Technology continues to advance, and the wheel is turning full circle. The early robots which had almost no haptic sense are giving way to newer ones that re-present the sense of touch.

It's not only in surgery that touch is changing. Many clinical consultations are now conducted remotely. Online and telephone encounters are increasingly common as artificial intelligence and sophisticated diagnostic algorithms become widespread. Yet for all their efficiencies these changes make physical contact impossible, eradicating the experience of touch from the consultation. All this makes a lot of sense in many ways, especially when gnostic touch is being augmented by technology. These developments too increase diagnostic precision and efficiency, allowing clinicians to respond to increasing workloads in an increasingly busy world. Yet we are at risk of losing something fundamental to the clinical encounter.

At the same time, changing cultural expectations make it unacceptable to touch in ways that were previously taken for granted. Touch between adults and children is closely regulated, informal contact that would once have gone unremarked is often seen as questionable, and tactile spontaneity is being reduced. Yet if we do not master touch as an expressive medium, we will be unable to speak or understand its language. Pathic touch will become a casualty.

Because touch is so difficult to put into words its importance is at risk of being overlooked. The language of touch is subtle, condensed and pared down, often taking place beyond conscious awareness. The briefest, lightest contact may convey volumes. It takes insight and attention to register the effect of pathic touch on other people and to become aware of it in ourselves. This is a language that we are not explicitly taught. We gain fluency through continual exposure. If that exposure diminishes, so may our fluency. Part of the problem is that we take touch for granted. Touch has no single unique sense organ, no equivalent of eye or ear or nose. It's not confined to our hands or our fingers but is everywhere in our body and it's connected with other senses such as proprioception (our bodies' positioning in space), temperature and pain. Because touch is everywhere, it is also nowhere.

Yet catastrophic loss of touch can occasionally happen. Ian Waterman was nineteen when he suffered a gastric upset and became acutely ill. A couple of days later he lost all sense of touch. This extremely rare condition - later called 'acute sensory neuronopathy syndrome' - permanently abolished all his sensation and proprioception from the neck down, though sparing muscular power, pain and the ability to recognise temperature. The neurologist Jonathan Cole has been studying Ian and his condition for decades. Ian has had to re-learn what most of us take for granted, those automatic functions that allow us to pick something up or place our limbs in space. He had to learn to walk again and it took him 14 months, because he had no idea when his feet touched the ground. He became literally out of touch. Yet experiences like Ian's remain vanishingly rare.

Touch and personal space

In these lectures I have made the case that medicine and surgery are forms of performance. Some performers are expert in entering and establishing themselves comfortably in other people's personal space. Performers outside medicine are especially impressive. In Lecture 1I introduced Fabrice, an expert hair stylist and teacher. As a novice, Fabrice had to learn how to approach his clients with sensitivity, not barging straight in to touch their hair. Fabrice was learning to enter his clients' personal space.

This term was popularised by Edward Hall in his 1969 book *The Hidden Dimension*, where he outlined the notion of what he called proxemics'. Hall was inspired by Heini Hediger, the pioneer of 'zoo biology'. Hediger pointed out that animals' function within small bubbles of territory which they take with them when they move. His ideas revolutionised zoo design by thinking of animals as 'owners of territorial property' rather than captives. Hediger's observations of animal behaviour shaped his ideas about interaction distances between members of the same or different species. He wrote of flight distance, critical distance, personal distance and social distance.

Hall then applied this to people, focusing especially on personal and social distance. He developed categories - intimate, personal, social and public distance - each with an exclusion zone, an area where you don't want other



people to be. The extent of this zone varies with the context and it can be reconfigured according to the circumstances. Anyone who has been jostled on an overcrowded tube train instinctively understands this. In the decades since Hall's book was published, the neuroscientist Michael Graziano has shown the neurophysiological basis for these ideas. He has identified multisensory neurones for tracking the location of things, even in the dark. He has demonstrated how an invisible 'second skin' emphasises nearby space while also weakly representing far space. Every body part has its own bubble, with its own radar system for recognising the position other people and inanimate objects.

This has implications for professionals who work in close proximity with others. Entering someone's personal space is like going into their house. When you become a guest in their domain you must be respectful and conform to how they do things. You must wait to be invited rather than barging in. You respect how that person expects you to behave on their territory. You take off your overcoat and perhaps your shoes. It's the same with touching strangers' bodies. You have to become comfortable with being with people at close quarters before they will be comfortable with you. You have to 'read' people's signals of personal space.

This is easier to recognise when it goes wrong than when it goes right. A successful waiter will be invisible, and the better the service, the less you notice it. But inept service is hard to miss. A waiter who looms over you, encroaching on your personal space without your agreement, creates a lasting impression. Something similar happens with an inexperienced clinician. Their insecurity transmits itself to you. An expert does the opposite, effortlessly passing through the body's defences. Close-up magicians are consummate artists here. They can enter personal space unawares. They bypass Graziano's radar, slip in under the exclusion zone. Clinicians have to do something similar.

For many experts, gnostic and pathic touch are combined. One of my colleagues, Sam Gallivan, is an expert hand surgeon. When she sees a patient in her clinic and shakes their hand in greeting, she holds onto it for a little longer than usual. Subtly she assesses the range of movement in the joints of fingers and wrist and detecting any thickening in palm or fingers. By the time the patient sits down, Sam already has a pretty good idea of what the problem is, and the patient feels reassured and in touch. Sam does this with such assurance that her patients don't even notice she's doing it. Like close-up magic in the hands of an expert, it just seems natural.

Learning the language of touch

Finally, I return to Fleur Oakes, the three-dimensional embroiderer I mentioned earlier. For several years now, Fleur has been the lace maker in residence at the vascular surgery unit at St Mary's Hospital, one of several major hospitals within the Imperial group. Over that time, she has spent hundreds of hours watching surgical operations. Fleur focuses on the performance of surgery through her lens as a textile artist. Although she has no anatomical training, she recognises similarities between her work and that of the surgeons she watches. Controlling tension (in threads and in herself), knowing how hard to pull or tie a thread, gauging the fragility of the tissues she is working with - all this depends on touch. Though Fleur sees the inside of the body with an artist's eye, noting colours, textures and consistencies, she sees parallels between the surgeons' techniques and her own. Fleur works with vintage textiles which are beginning to fray and disintegrate, so she is developing a training programme for teaching surgeons essential skills. Fleur has created a *Textile Body*, where she can show non-surgeons like her how to work together in a confined space, relying on their sense of touch to separate and join delicate structures without causing damage. The *Textile Body* requires no anatomical or medical knowledge. Instead it requires a awareness of touch. At the heart of this sensitivity is care - care for what is precious, vulnerable or on the verge of collapse.

The pace of medical change is so rapid that we can lose touch with touch without even realising it. The extraordinary advances in imaging, surgical technology, remote consultation, artificial intelligence and the rest are so compelling that touch may seem redundant. Yet when we think of medicine as performance, touch is as important as ever. It is a precious sense and we must remain fluent in its language. I worry that the shift in emphasis away from gnostic touch will have a knock-on effect on its pathic counterpart. Already we are seeing medical students and doctors who feel uncomfortable at touching their patients' bodies. The language of touch is all around us, hiding in plain sight. Like any language, if we do not practice it we will become rusty.

We need not only to recognise what we feel but understand how we make others feel, in every sense of the word. We have to attune our receiving apparatus to our patients' responses. And we have to be aware of the communicative power of touch, of the reassurance that can come from the lightest, briefest touch on the arm or the shoulder - or the jolt from insensitive pressure or the rebuff of no response. Until now, pathic fluency has developed as a by-product of gnostic touch. Though years of examining every part of the body, clinicians became



adept in the unspoken languages of touch. In a fragmented and atomised society, human touch is becoming increasingly rare. The need for pathic touch has never been greater.

I leave the last word with an insight from physiotherapy. Bjorbaekmo and Mengshoel end their 2016 paper by saying *'In physiotherapy, touch is far more than a cutaneous sensation; it opens the way for a trustful, respectful co-existence between therapist and patient, and in tandem with movement enters a dance-like progress in whose silent, leisured pace there are healing possibilities'*.

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