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Do Physicians Dream of Electric Sheep: Examining the Conflict Between Compassion and Technology

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A few years back in medical school, I had the privilege of participating in research on doctor-patient communication for patients who had cancer. In one of our projects, we examined how physicians express compassion for their patients [1]. We closely reviewed audio recordings of oncologist-patient interactions, searching for those subtle and not-so-subtle moments of caring. How could we describe and quantify such acts? What could we learn from systematic observation? This attempt at modeling was intellectually enthralling, even if I often left despondent after reading transcripts of patients confronting death.

Compassion, that ancient and divine quality, has now been described as the ability to actively imagine a sufferer's condition, to share in their distress, and thus be compelled toward alleviating it. Compassion goes beyond empathy, empathy ending at thoughtfulness while compassion mirrors suffering itself. What patient wouldn't want such a forceful emotional investment by their care provider?

Compassion is why I became a doctor. Call it an act of heedless bravery for a sensitive child. From friends to relatives, even to pets, I took personally the physical and mental aches of those around me. Many people can get through others' suffering with only superficial psychic abrasions – a sturdy defense in a world like this – but for those of us who are naturally physiologic in our imagination, we're lucky to get through it at all. I wanted to see suffering put to an end, so I became a doctor.

One doesn't have to be in the medical world long to realize the impossibility of such an ambition. Putting aside the great joys of the world, and the inequality of their distribution, there is still more illness and pain than Moloch's entire army of sensitive children could hope to address. Every medical student and physician learns to circumscribe their aspirations. What we label our "calling" – our specialty – is really the signing of a lease for which particular diseases (and the patients who endure them) we can afford to face month after month.

In entering pathology training, I put a down payment on participating in the heartbreak that comes with cancer diagnoses, which I make daily. In practice, I face down only one aspect of cancer: its unadulterated biological reality, mediated through exacting laboratory methods. How much, then, am I fully participating in the reality of cancer? Ask an oncologist if a pathologist could possibly experience her struggles as she juggles hard choices, difficult therapy, and eternally hopeful patients. In pathology's intellectual remoteness, its method of applying a diagnosis from a scientific distance, it seems an

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impediment to compassion. Signing a diagnostic report is its own brave act, but the pen or keystroke could never channel the pain of our patients the way face-to-face relationships do.

In recent years, I've realized that while the experience of pain motivates, it likewise shrinks the world. Medicine can be highly effective when it recognizes the vastness of disease, beyond its intractable individuality. When I examine cells under a microscope, for example, I may be seeing the discrete actors generating a patient's cancer, but I am also witnessing a meticulous choreography – a performance across centuries and borders.

In the impersonal, I am able to categorize and prognosticate. Modern medicine relies on the invisible, taxonomic pathologist. The rise of "personalized medicine" is, ironically, a continuation of this reductionist mode, one that deconstructs an individual into her faceless genetic components. Patients seem eager to undergo this ultra technical analysis because while they may desire compassion from their doctors, they also demand answers.

I deliver answers in computerized, rapid-fire form dozens of times a day. I deliver them first to our specialized pathology reporting software, where after they are finalized they make their way into a different electronic medical record accessible to the patient's treating physician. The news hurries into the clinician's electronic "inbox," where a virtual notification acts as an unceremonious prelude for the diagnosis to follow. The clinician must shoulder the entirety of the emotional burden inherent in the final leg of this race, the one where the patient hears the frequently awful news himself.

Yet there must be some appeal in running earlier legs of the race, despite the humble place pathology holds in medicine. Many academic oncologists seem engaged in their own versions of technical sterility. Reading the literature, I am confronted with endless observational analyses, retrospective reflections on patients already lost. Through software-driven dissections of risk factors, interventions, and a cacophony of genetic differences, many physician-scientists hope to find not only cures, but more precise ways of probabilizing death – "prognostic markers" in standard vernacular.

From one perspective, what's more kind than an honest probability? But the kindness also falls on the doctor, who suffers fewer painful stigmata from effortlessly manipulating charts than from making irrevocable decisions with patients. Similarly, computer simulation and animal experimentation offer durably distant modes for the physician to engage in healing.

The diagnosis and treatment of cancer, it seems, must contain more than poetry and compassion. Even without pathos, science creates its own humanism. When I diagnose patients, it is not as that sensitive child, but with an analytic mind honed by a decade (so far) of training. While I hope to find more room for the compassion that brought me into medicine, I wonder where it would fit. As I grow older, I gather more of my own baggage and responsibilities, and grapple with the contradictions of being a science-driven healer. Engaging in intemperate sympathy and avoiding the epidemic of physician burnout can be mutually exclusive for some.

Today's science-based medical practice appears to offer countless opportunities for a deep engagement with patient suffering while offering just as many methodically rigorous escapes. Young physicians must learn to navigate those fine distinctions between analysis and alienation. Will we be Freudians or martyrs? Tinkerers or healers? And how are our healthcare systems built atop these deeply personal decisions? If we demand ubiquitous, routinized compassion from healthcare providers, we may endanger the stability of our emotional labor force.

While pathologists might represent a more extreme form of scientific detachment in the medical world, I don't think I'm alone in asking these questions. From microscopic to statistical abstractions, we all try not to lose sight of the patient. Doctors, however, can't be afraid to also ask for a little compassion for themselves, for the system not to lose sight of us. From this vantage point, the technological aspects of medicine are not only necessary, but humane as well.

REFERENCES

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