

Mildred Solomon, Commencement Address, Harvard Medical School Masters in Bioethics Recipients, May 2016

Professors Truog, Mitchell and Brendel, Other Faculty, Fellows, Graduates and Guests –

Good afternoon. It's a great honor to have been invited to speak with you today, and a great pleasure. It's exactly 25 years since I was at my last Harvard graduation – for that one, I was wearing black robes, not crimson, and I was on **your** side of the podium, in Harvard Yard, receiving my doctoral degree in educational research methods and adult learning. My doctoral dissertation was on how physicians conceptualize the moral dilemmas they face, when caring for the gravely ill. And I had no idea then, that 25 years later, I would be a professor of medical ethics, here at Harvard Medical School, and president of The Hastings Center in New York.

It's a good guess that you too probably have no idea where you will be 25 years from now. But I know from learning a little about your capstone projects and the kinds of things you did before you were accepted into our very hard-to-get-into programs that you will be making extraordinary contributions, no matter where you land, or what paths you take to get there.

Commencement speakers are supposed to offer words of wisdom. That's a daunting task under any circumstances, but especially here with the likes of you, who are so accomplished and already for many of you, far along in distinguished careers – but I will give it my best.

What I'd like to talk about is the highly unusual undertaking we have all signed up for – careers, or at least formal activities of some kind --in bioethics. Whether you think of bioethics as a profession, as a calling, as a discipline, or as an interdisciplinary field of inquiry – you've got to admit – it's well **special**, maybe even **peculiar**.

Those of us with bioethics training are, inevitably, asked for our advice – not about **preferences** like where should we eat tonight, or what do you think was this season's best movie -- and not about **technical matters** – like what's the best way to build this bridge, or design this software, or cure this disease. No, we are asked to render opinions – to offer reasoned judgments – **about what the right thing is to do**.

And we do that, we render opinions --- on some of the most vexing issues patients, health care professionals, scientists, and policymakers face in our turbulent and uncertain time.

A time when we are still working to create a safe, compassionate and affordable health system, trying to figure out the best ways to protect the human beings who volunteer to participate in research, how to manage public health crises like Ebola and Zika in ways that protect the public while not unduly infringing on personal liberty, how to fairly distribute life-saving organs, and how to ensure responsible innovation and the wise use of emerging technologies – like our recently

expanded powers to permanently change the human genome, the very nature of the human species....

No pressure....easy stuff like that...no worries.

And it's curious, isn't it? All of us...those on faculty and all of you who will now have a Harvard degree or certificate in bioethics behind your name – we've **asked** for this. We've set ourselves up to be people whose opinions are sought about a great many grave matters.

So one's got to ask: What's wrong with us?

Another way to put the question is: Why have we gone into bioethics? What's the motivation? Why develop expertise in bioethics in the first place? Why is bioethics itself important?

I was on the phone with my daughter about a week ago. She's just completed a certificate program in animal behavior, specifically canine behavior. She was explaining to me the motivation of the people who were in her program. They all have a commitment to training dogs in "force-free" ways. As she explained, you can get your dog to walk down the street without pulling you, if you put a choke chain on him. He will stop pulling. But he will do it to avoid the pain of the pinching collar. Or, you can train your dog in other ways that shape his behavior, ways that may take a little longer, but that do not entail threats or the use of pain. In both cases, the dog owner gets the result they want – a peaceful walk in which your dog is beside you.

But to my daughter and the others in her program, **how** you get that result matters. It's not just efficiency and a specific outcome they are after. They see important values at stake in how the outcome is achieved. In this case, they're okay with **less** efficiency, if it means a pain-free, nonthreatening relationship with their dog.

There's an underlying value at stake – one that isn't always very visible. Many people just say – I want my dog to walk alongside me. But others with a certain sensibility, with attunement to a certain set of values, might be less focused on the final outcome, might say that's not good enough – I want my dog to end up walking alongside me in a certain kind of relationship with me – one that avoids threats or the administration of pain.

We live in a culture that is focused on technical expertise, outcomes and efficiency, but which has very few venues or social space for discussion of values. Take the Food and Drug Administration, for example. Its mandate is squarely focused on determining whether a drug or device will be effective and whether it will be safe – two types of outcomes that are visible and quite quantifiable.

But that leaves an awful lot of values questions that are harder to measureunspoken.....off the table.

This is not a criticism of the FDA – it’s appropriate that regulatory agencies have a specific, narrow scope.

But I am contrasting that with what I think all of us in bioethics seek – more opportunities for members of our diverse society to grapple together about big questions of meaning and purpose.

Many of us have asked questions about meaning and purpose with respect to an array of clinical ethics issues. In my own career, a lot of my scholarship has focused on trying to improve end of life care. Many of us have been concerned about the so-called technological imperative – that in health care, we use technology just because it’s there, not because it will bring real benefits. All of us have a parent or family member story to tell – about the excruciating decisions we faced in determining whether to use or forgo life supports. We all know people who spent their last days or weeks attached to a ventilator in the ICU, or trached, tubed, and then sent to a nursing home, when in fact there could have been a better way.

And what we worry about, when we shake our head and say– “there could have been a better way” – what we mean is that something of value was lost. In trying to improve end of life care, the harms we wish to avoid are not only problems of safety and efficacy – although the over-use of technology near the end of life can be highly inefficient and does introduce medical error and physical harms.

But the really deep, abiding distress we feel, when we have watched the over-use of such technologies in our loved ones, is a concern about dignitary harms...a worry that we have not honored the person, or comforted them, or born witness and said goodbye, or asked forgiveness. These are ineffable, hard-to-talk-about harms...but I believe that many of us have taken on the unusual, special, **peculiar** burden of considering what the right thing is to do – of becoming bioethicists – because we think these ineffable, hard-to-talk-about values, really matter. We are a group who tends to think that how one walks the dog matters.

What values one privileges, or doesn’t, is going to matter more and more, because we are in a tsunami of innovation. Advances in genetics, assisted reproductive technologies, neuroscience, synthetic biology, nanotechnologies, and artificial intelligence are galloping forward. In addition there are converging technologies at the intersections of these fields. The pace of innovation is exhilarating; it’s awe-inspiring. But no technology is neutral. And in all these cases, it will be essential to consider how best to integrate these technologies, when it might be appropriate to draw some lines, which applications we may feel are truly enhancing and supportive of human flourishing and which may undermine important values or ways of being in the world that we want to protect.

Take, for example, the new gene editing technique – CRISPR Cas9. It has radically simplified and reduced the cost of changing genomes. Already used in monkeys, it is nearly ready for use in

humans. Its potential to eradicate devastating genetic conditions and improve human health is awe-inspiring. However, if used to change human germline cells, those changes would be passed on from one generation to the next.

That is a transformative, thrilling power. It can be directed to good, or if used indiscriminately, in ways we may deeply regret. Transhumanists and other commentators see this as an opportunity to transform the human species into something better than it is; some say that as we learn more, parents will even have an obligation to create the best possible baby. Others worry that we will begin to treat our children as objects to be acted upon, and that we will develop a kind of hyper-agency that will result in a sense of “over-mastery,” diminishing our sense of wonder and gratitude, reducing the sense that children come to us as gifts to be nurtured for who they are. A third set of views is that a middle path can be found, in which it will be possible to use gene editing for specific therapeutic or preventive purposes, to eliminate devastating genetic conditions, but without the expanded negatives foretold by either enhancement enthusiasts or enhancement skeptics.

There is one common element that runs across clinical ethics, research ethics, public health ethics and across the ethical assessment of all the emerging technologies – of which gene editing is only one example – that common element is uncertainty.

Graduates, faculty, we have all chosen to live out our work lives in a sea of uncertainty.

So, if I have any words of wisdom to offer – I think they should focus on the navigational orientation most helpful for managing life on the Sea of Uncertainty.

First, let’s think about how hard this is. Those of us traveling on these waters need to tolerate unpredictability (the winds may come from anywhere) and ambiguity (one never knows what tomorrow’s weather will be).

In order to come to a truly reasoned judgment, we need to stay open to multiple perspectives, perspectives with which we may initially disagree and ones that are often expressed by people whose politics, color or lived experiences are very different from ours.

We have to avoid simple and premature “pro” or “con” positions. This is very hard to do in our polarized culture and in the highly dichotomized world of analytic philosophy that has so strongly influenced bioethics. But my advice is to resist prematurely taking sides or reifying polarities. Often the question isn’t whether you are pro or con genetic enhancements, for example – rather it is -- which enhancement is truly going to promote human flourishing, truly advance an authentic value we hold dear?

One needs time to consider all views. As Aristotle said in *Metaphysics*, “It is the work of an educated mind to be able to entertain a thought without accepting it.”

But then this is even harder – because not only should we consider a range of views, listen to other perspectives, avoid unnecessary polarities – but a noble life also means that at some point, we must decide. Sometimes we need to act – we need to say, “No, that’s wrong, stop, don’t, and here’s why.”

In other words, we have this tremendously difficult gangplank to walk – forgive my extension of this nautical metaphor, but though stretched, I think it still serves – the plank we must walk requires openness to a range of views, but a willingness ultimately to decide one way or the other and to offer reasons. Knowing when and how to do that is a tremendous skill – one that gets comfortable with more practice.

In closing, I’m going to turn to someone whose work influenced mine. In the same year I was working on my dissertation, Donald Schon, a faculty member at MIT, published a wonderful book, called *Educating the Reflective Practitioner*. Schon argues that in professional practice, there are “indeterminate zones of practice” marked by uncertainty, uniqueness, and value conflict that “escape canons of technical rationality.” He develops the concept of “professional artistry” to describe practitioners who are highly skilled at dealing with those indeterminate zones.

According to Schon, those who exhibit professional artistry are not only good at problem solving, they are also good at problem posing. Problem posing requires an inclination to ask future-oriented questions about overall purpose, goals and meaning. It means not just being good at building a boat, but at determining where it should sail – what the ends or the destination are, towards which the boat should sail.

My wish is that we may all develop professional artistry, so that we do not only offer our technical skills but we are able to ask questions about purposes, about the values and the ends to which we should apply our biomedical knowledge and powerful technologies. And finally, that we do so with humility and abiding awareness that we may well be – and probably often are - wrong.

With that in mind, I will close with advice crafted by the great 20th and 21st Century philosopher, JK Rowling, who put words of wisdom into the mouth of Dumbledore.

“The truth.” Dumbledore sighed. It is a beautiful and terrible thing and therefore should be treated with great caution.”

May you go forth with enthusiasm, commitment, insight **and** the caution that comes with humility.

Congratulations.