



# ENGLISH SPEECHES

## WITH BIG SUBTITLES



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### 3 FORMS OF LISTENING

<https://youtu.be/FvcWRYuGSTg>

“Generation L.”

Before I begin, I want you to turn to your left, turn to your right. And congratulate the person next to you, even if you don’t know them. Congratulations to graduates of the class of 2018!

Yes, yes, yes; I know what you are now thinking. “Last year, we had Will Ferrell.” He was funny, upbeat, quirky – a comic genius. How come we got stuck with the cancer guy?”.

But hold that thought for a second, for here we are, on this absolutely glorious morning – and if there’s one thing that Mr. Ferrell and I do share, it’s this: We are both immensely, immensely honored to be asked to speak to you. And so let me congratulate you, and your families, on what is definitely one of the most memorable days of your life.

In writing this talk, I decided to take a break and play chess with my younger daughter, Aria, who is all of eight years old, and perhaps a future Trojan. It may have been the first time that I had played with her. We made a few perfunctory moves. I traded a pawn for a pawn, and a knight for a knight, and I saw her easing into the rhythm of the game. She made a few clumsy moves and then corrected herself. She almost sacrificed her queen. And then, about an hour into the game, I witnessed something astonishing happened. A dry, wily smile spread over her face – a smile that I had never seen – and she began to play well. Not just well – but very well. Every move that I made was countered by her move. I lost a rook, then a bishop, and then the whole kingdom. “Checkmate,” she said triumphantly. And then I realized what had happened in the last half hour. She had learned to see the board through my eyes. She had climbed out of her own head into the crawl space of my head. She was thinking my thoughts before I had them. She was listening to my brain, eavesdropping on my mind.

This talk is not about talking, but about listening.

Let me tell you a very different story: In the early 1950s, the mortality rate from childhood lymphoblastic leukemia – cancer of white blood cells – was 100 percent. Every child diagnosed with leukemia died. The illness was called a “suppuration of blood”: because doctors thought that the blood had somehow suddenly turned rotten, and, like spoiled milk, there was no way of turning it back.

But two young doctors in their thirties – Emil Frei and Emil Freireich – decided to launch an attack on childhood leukemia. They began to treat the kids with an experimental drug, a highly toxic form of chemotherapy. There was a brief, flickering response, but then all the patients relapsed. But far from



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backing off, Frei and Freireich doubled down, adding a second, even more, toxic form of chemotherapy. Then they added a third, and then a fourth. The effects of the combination chemo were terrifying – hair loss, infections, bleeding, organ failure. Other doctors began to call their hospital ward “a butcher shop.” The remissions now strengthened to four and then eight months. Yet, still, every child relapsed and died.

It was like playing a cellular chess match – a game against cancer. Every move that they made was met by a counterpoised move; a knight was traded for a knight, a pawn for a pawn. And that’s when Frei and Freireich realized that they had to get into the “mind” of the disease. To solve these relapses, they had to know what game the leukemia was playing before the cancer made its next move. “The best [doctors] seem to have a sixth sense about disease,” one physician wrote. “They feel its presence, know it to be there, they perceive its gravity before any intellectual process can define, catalog, and put it into words.”

“We began to understand its language, and its interior logic,” Frei once told me. And so in the final round of experiments, they instilled chemotherapy directly into the brain and spinal cord of four and five-year-old children. And at last, these children began to be cured. The cure rates climbed magnificently – from forty percent to sixty percent, to seventy percent. Childhood leukemia is now among the most curable forms of cancer – about eighty percent of the time. This cure ranks among the singular achievements of modern medicine. It inspired one doctor to say, “If I had the choice between walking on the moon and curing a child with cancer, I would never look at the moon again.”

Which brings me back to listening. I want to talk to you today about the possibility – the requirement, even – of climbing out of your own heads and into another mind. It seems to me to be a uniquely human capacity (although to be fair, my wife swears that our dog can do it too, but that’s just a very smart dog). In fact, I might argue that it’s a definingly human capacity – and yet, oddly, there’s no word in our language for it.

This kind of listening takes three forms. The first is the kind that I experienced with my daughter. We occasionally term this “empathy” – but we need a different word here, for it could be purely strategic activity, as with my daughter entering my mind to beat me at chess, or a military general entering his or her enemy’s head in the midst of a campaign, or a doctor entering the mind of an illness. The important feature of this kind of listening is that it asks you to do something nearly fantastical, like one of those transmorphic beings in *Aliens*: to abandon your own, private self – your identity, your past, your language – and to acquire the language, identity, skin of another person. What is it like to be him, or her? What is their suffering, or their joy, like? What makes them tick? What if I was born as that woman or that man? In a sense, all human conversation depends on the minor exercise of this faculty: every time we talk, we partly desire to enter each other’s heads. This capacity is impaired in the severest forms of mental illness, leading to a person disturbingly unable to function in the world. That’s the first kind of listening.

The second involves listening to the past, listening to history – climbing, as it were, into the mind of history. “History doesn’t repeat itself, but it rhymes,” is a quote attributed, perhaps apocryphally, to Mark Twain. To understand that rhyme – to comprehend the parts that come back, but with a slightly altered lilt, a slightly altered tone or emphasis – is also a profound form of listening.



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The third form of listening is the most abstract. It is listening to nature. It's the kind of listening that scientists aspire to, or artists often talk about: eavesdropping on the universe, learning its natural laws, its geometries, its rhythms, and constancies – its “mind.” In medicine, it might take the form of listening to the inner logic of an illness. In physics: listening for equations that explain the cosmos. In literature: that illuminated moment when you've inhabited the characters on the page, or on the screen, so fully that they begin to speak back to you, like a gang of old friends. At the age of sixteen, Einstein asked himself what it would be to ride a beam of light. That question – what would it be like to inhabit the cosmos at its limits? What would it be like to “BE” light – would drive Einstein's scientific imagination for the rest of his life.

Here's the main point: these three forms of listening – to another mind; to history; to nature – mark your entry into adulthood. You might think of these as the three sides of a uniquely human triangle, or a three-sided portal through which we must all pass: we are the only species that can learn to think like another of our own species; the only one that records and remembers its history; the only one that tries to decipher the laws of the universe. Psychologists speak of the immense transitional moment in a child when he or she acquires a social smile. Does every parent here remember the first time their child acquired their social smile? That's the moment that a child engages the world: she begins to come out of her own head. You might imagine your emergence into adulthood marked by another kind of engagement: by listening. It marks the completion of the “coming out of your own head” that you began, decades ago, with that first smile.

I, for one, had not learned to listen when I graduated from college. It wasn't until three years later, when I was really in the thick of my studies in immunology, that I learned to listen to what an experiment had to say. That's when I made my first scientific discovery – about how viruses and cancers can learn to become invisible to the immune system. They do so, I learned, by tricking an ancient cellular system to recognize their “foreign-ness.” I also learned that if you could undo this trick, you might goad your own immune system to detect the virus or cancer again – an idea that has emerged as one of the most exhilarating new themes in biology and medicine. I remember staying up past midnight looking at the radioactive counter tick-tick-ticking, waiting for the groaning old printer that was almost out of ink to print the pages of data, and realizing that I was, in fact, suddenly eavesdropping into one of the most profound mysteries of biology and the universe.

It took me another four years before I learned to listen to a patient. In the first year of my residency, I cared for a young man with esophageal cancer. Steve was a plumber from North Boston, about thirty-six, and about to get his ninth round of chemo – a dose-dense, intense regimen that required a strict adherence to schedule. But that morning, he just wasn't having it. He'd had a bad day. He came to the hospital and said flatly: “I don't want to fight this war. You fight the war. I don't want to be a casualty. I am not a soldier. I want a cookie”.

I learned, that morning, that words like “war” and “soldier” don't work for everyone every time; that the restoration of sanctity and sovereignty and dignity is a goal in and of itself; that the art of doctoring is negotiating with hope. And that when a grown man says he wants a cookie, he wants a cookie. I got Steve his cookie – mint chocolate chip – and asked him to go home and come back next week. The chemo could wait. The hospital could wait. The tests could wait. I could wait. Steve lived for an additional twenty-four



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months because of his intensive treatments. He got to see his oldest son graduate from high school. But if I had pushed him too hard that morning, I would have lost him as a patient.

And yes – ironically for a medical historian – I learned to listen to history last. I was a first-year fellow in oncology – you know the kind: aloof, exhausted, nose to the ground, the man in scrubs who snaps at you on the subway and tries to solve your crossword –when a woman asked me a question that stunned me: “where are we in this fight, and who is going to win?” And I realized that we had no history of this elemental, shape-shifting illness that has haunted us from the beginning of time. I had no intention of becoming a writer, but that was the day I started writing my book that eventually grew and grew and grew into a 600-page history of cancer.

I am telling you this because I wish someone had told me at my own commencement that the one and only requirement for graduation was not that I had to finish these many credits, or pull those many all-nighters, or attend these many late night mixers – or, for that matter, survive Drew Caspar’s lectures on – but that I had to emerge out of the closed, cordoned-off, space of my own head. This was the sole requirement that no one told me about. I had to learn to listen – to another mind; to nature; to history.

I cannot also help notice that in the past one year or so, we have turned into a nation of bad listeners. I had promised that I would not contaminate this talk with the tawdriness of contemporary politics, but is it possible to ignore the fact that we have stopped listening to each other? Or, for that matter, stopped listening to the lessons of the past, or to natural laws? It seems that every toxic rupture in our culture – our willful depredations on the climate and the environment, the circus of our elected leaders who encourage us to ignore their personal history and national history, or those who take fail to defend the defenseless and who goad us to reject natural laws and facts – is, at its root, a rupture of listening.

Nor can I help noticing that the word “listen” can be rearranged into “silent.” Silence is the absolute pre-requisite of listening. It’s opposite is not “sound” or “noise” or “cacophony” – but “Tweeting.” Perhaps social media was intended, at the distant moment of its inception – oh when was Facebook invented? 1878? – as a means to enable communal listening. But it has, in fact, encouraged a pathological syndrome called “staying inside your own heads.” The premium placed on self-curation, on individuality, on identity – who are you? – has created a perpetual echo chamber of self-actualization from which there is seemingly no escape.

But you, of course, will be part of the listening generation. Your predecessors tried – but we could not leave our tiny, reverberating chambers of navel-gazing identity and self-curation. We could not get out of our own heads. We have plenty of tools – social media, cell phones, emails. But we mistook them; these were hearing tools, not listing tools. You, however, are part of the new order. You will learn to hear each other out, learn to inhabit each other’s joys and suffering. You will fight on, but you will listen in. Unlike us, you will really defend the defenseless. Unlike us, you will really learn history. You will discover the natural laws that we missed in the midst of our cacophony. You will be the listening generation – Generation L.

The irony of this talk has not escaped me: I have spent twelve minutes talking to you about... um...listening. Only pathological people speak like this – without listening – so now it’s time for you to carry the



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conversation forward. Congratulations, again, Generation L. Congratulations to your parents, to your friends, to your families, to everyone who supported you. And to yourselves. Go get out of your heads and go out into the world and listen to it. And most importantly: make us listen to you.

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