In two weeks time, // that's the ninth anniversary of the day / I first stepped out onto that hallowed "Jeopardy" set. // I mean, / nine years is a long time. // And given "Jeopardy's" average demographics, // I think what that means is / most of the people who saw me on that show are now dead. // But not all, / a few are still alive. // Occasionally I still get recognized at the mall or whatever. // And when I do, // it's as a bit of a know-it-all. // I think that ship has sailed, / it's too late for me. // For better or for worse, / that's what I'm going to be known as, / as the guy who knew a lot of weird stuff. //

And I can't complain about this. // I feel like that was always sort of my destiny, / although I had for many years been pretty deeply in the trivia closet. // If nothing else, / you realize very quickly as a teenager, / it is not a hit with girls to know Captain Kirk's middle name. // And as a result, / I was sort of the deeply closeted kind of know-it-all for many years. // But if you go further back, / if you look at it,/ it's all there. // I was the kind of kid / who was always bugging Mom and Dad / with whatever great fact I had just read about //-- Haley's comet or giant squids or the size of the world's biggest pumpkin pie or whatever it was.// I now have a 10-year-old of my own / who's exactly the same. // And I know / how deeply annoying it is, / so karma does work. //

And I loved game shows, / fascinated with game shows. // I remember crying on my first day of kindergarten back in 1979 // because it had just hit me, / as badly as I wanted to go to school, / that I was also going to miss "Hollywood Squares" and / "Family Feud." // I was going to miss my game shows. // And later,// in the mid-'80s, // when "Jeopardy" came back on the air, // I remember running home from school every day / to watch the show. // It was my favorite show, / even before it paid for my house. // And we lived overseas, / / we lived in South Korea / where my dad was working, // where there was only one English language TV channel. // There was Armed Forces TV, // and if you didn't speak Korean, // that's what you were watching. // So me and all my friends would run home every day and watch / "Jeopardy."//

I was always that kind of obsessed trivia kid. // I remember being able to play Trivial Pursuit / against my parents / back in the '80s / and holding my own, / back when that was a fad. // There's a weird sense of mastery / you get when you know some bit of boomer trivia // that Mom and Dad don't know. // You know some Beatles factoid // that Dad didn't know. // And you think / knowledge really is power // -- the right fact deployed at exactly the right place. //

I never had a guidance counselor // who thought this was a legitimate career path, // that thought you could major in trivia / or be a professional ex-game show contestant. // And so / I sold out way too young. // I didn't try to figure out / what one does with that. // I studied computers // because I heard / that was the thing, // and I became a computer programmer // -- not an especially good one, // not an especially happy one at the time / when I was first on "Jeopardy" in 2004. // But that's what I was doing. //

And it made it doubly ironic // -- my computer background // -- a few years later, // I think 2009 or so, // when I got another phone call from "Jeopardy" saying, // "It's early days yet, // but IBM tells us / they want to build a supercomputer / to beat you at 'Jeopardy.' // Are you up for this?" // This was the first / I'd heard of it. // And of course I said yes, // for several reasons. // One, // because playing "Jeopardy" is a great time. // It's fun. // It's the most fun / you can have with your pants on. // And I would do it for nothing. // I don't think / they know that, // luckily, / but I would go back / and play for Arby's coupons. // I just love "Jeopardy," // and I always have. // And second of all, // because I'm a nerdy guy / and this seemed like the future. // People playing computers on game shows / was the kind of thing / I always imagined / would happen in the future, // and now / I could be on the stage with it. // I was not going to say no. //

The third reason I said yes // is because / I was pretty confident that / I was going to win. // I had taken some artificial intelligence classes. // I knew there were no computers // that could do / what you need to do to win on "Jeopardy."// People don't realize how tough it is // to write that kind of program // that can read a "Jeopardy" clue / in a natural language like English / and understand all the double meanings, / the puns, / the red herrings, / unpack the meaning of the clue. // The kind of thing / that a three- or four-year-old human, / little kid could do,/ very hard for a computer. // And I thought, // well this is going to be child's play. // Yes, I will come destroy the computer / and defend my species. //

But as the years went on, // as IBM started throwing money / and manpower / and processor speed at this,// I started to get occasional updates from them, // and I started to get a little more worried. // I remember a journal article / about this new question answering software / that had a graph. // It was a scatter chart / showing performance on "Jeopardy," // tens of thousands of dots representing "Jeopardy" champions / up at the top / with their performance plotted on number of // -- I was going to say questions answered, // but answers questioned, // I guess, // clues responded to /-- versus the accuracy of those answers. // So there's a certain performance level // that the computer would need to get to. // And at first, / it was very low. // There was no software / that could compete at this kind of arena. // But / then you see / the line start to go up.// And it's getting very close / to what they call the winner's cloud. // And I noticed in the upper right of the scatter chart // some darker dots, // some black dots, // that were a different color.// And thought, // what are these? // "The black dots in the upper right / represent 74-time 'Jeopardy' champion Ken Jennings.// " And I saw this line coming for me.// And I realized,/ this is it. // This is what it looks like / when the future comes for you. // It's not the Terminator's gun sight; // it's a little line / coming closer and closer to the thing you can do, // the only thing / that makes you special, // the thing you're best at.//

And when the game eventually happened about a year later,// it was very different / than the "Jeopardy" games / I'd been used to.// We were not playing in L.A. / on the regular "Jeopardy" set. / Watson does not travel. // Watson's actually huge. // It's thousands of processors, // a terabyte of memory, // trillions of bytes of memory. // We got to walk through his climate // -controlled server room. // The only other "Jeopardy" contestant to this day / I've ever been inside.// And so / Watson does not travel. // You must come to it; // you must make the pilgrimage.//

So me and the other human player / wound up at this secret IBM research lab / in the middle of these snowy woods in Westchester County / to play the computer. // And we realized right away that // the computer had a big home court advantage.// There was a big Watson logo / in the middle of the stage. // Like you're going to play the Chicago Bulls, // and there's the thing in the middle of their court. // And the crowd was full of IBM V.P.s // and programmers cheering on their little darling, // having poured millions of dollars / into this hoping against hope // that the humans screw up, // and holding up "Go Watson" signs // and just applauding like pageant moms / every time their little darling got one right. // I think guys had "W-A-T-S-O-N" / written on their bellies in grease paint. // If you can imagine computer programmers // with the letters "W-A-T-S-O-N" / written on their gut, // it's an unpleasant sight.//

But they were right. // They were exactly right. // I don't want to spoil it, // if you still have this sitting on your DVR, // but Watson won handily. // And I remember / standing there behind the podium // as I could hear that / little insectoid thumb clicking. // It had a robot thumb // that was clicking on the buzzer. // And you could hear that little tick, / tick, / tick, / tick. // And I remember thinking, // this is it. // I felt obsolete. // I felt like a Detroit factory worker of the '80s // seeing a robot // that could now do his job on the assembly line. // I felt like / quiz show contestant was now the first job // that had become obsolete // under this new regime of thinking computers. // And it hasn't been the last.//

If you watch the news, // you'll see occasionally // -- and I see this all the time // -- that pharmacists now, // there's a machine / that can fill prescriptions automatically // without actually needing a human pharmacist. // And a lot of law firms are getting rid of paralegals // because there's software // that can sum up case laws // and legal briefs / and decisions. // You don't need human assistants for that anymore. // I read the other day about a program // where you feed it a box score / from a baseball or football game // and it spits out a news article // as if a human had watched the game // and was commenting on it. // And obviously these new technologies can't do / as clever or creative a job / as the humans they're replacing, // but they're faster,// and crucially, // they're much, / much cheaper. // So it makes me wonder // what the economic effects of this might be.// I've read economists saying that // as a result of these new technologies, // we'll enter a new golden age of leisure // when we'll all have time / for the things / we really love // because all these onerous tasks will be taken over by Watson // and his digital brethren.// I've heard other people say quite the opposite, // that this is yet another tier of the middle class // that's having the thing / they can do taken away from them / by a new technology // and that // this is actually something ominous, // something that we should worry about. //

I'm not an economist myself. // All I know is / how it felt to be the guy put out of work. // And it was friggin' demoralizing. // It was terrible. // Here's the one thing / that I was ever good at,// and all it took was IBM pouring tens of millions of dollars // and its smartest people // and thousands of processors / working in parallel // and they could do the same thing.// They could do it a little bit faster // and a little better on national TV, // and "I'm sorry, / Ken. // We don't need you anymore. // " And it made me think, // what does this mean, // if we're going to be able to start outsourcing, // not just lower unimportant brain functions. // I'm sure many of you remember a distant time // when we had to know phone numbers, // when we knew our friends' phone numbers. // And suddenly // there was a machine that did that, // and now we don't need to remember that anymore. // I have read that // there's now actually evidence that // the hippocampus, // the part of our brain // that handles spacial relationships, / physically shrinks / and atrophies in people // who use tools like GPS, // because we're not exercising our sense of direction anymore. // We're just obeying a little talking voice / on our dashboard.// And as a result, // a part of our brain / that's supposed to do that kind of stuff / gets smaller and dumber. // And it made me think, // what happens / when computers are now better at knowing // and remembering stuff than we are? // Is all of our brain going to start to shrink // and atrophy like that? // Are we as a culture / going to start to value knowledge less? // As somebody / who has always believed in the importance of the stuff // that we know, / this was a terrifying idea to me.//

The more I thought about it, // I realized, // no,// it's still important.// The things we know are / still important. // I came to believe // there were two advantages // that those of us / who have these things in our head // have over somebody who says, / "Oh, / yeah. // I can Google that. // Hold on a second.// " There's an advantage of volume, // and there's an advantage of time. //

The advantage of volume, // first, // just has to do with the complexity of the world nowadays. // There's so much information out there. // Being a Renaissance man / or woman, // that's something that was only possible in the Renaissance. // Now it's really not possible to be reasonably educated / on every field of human endeavor. // There's just too much. // They say that the scope of human information is now doubling every 18 months or so, // the sum total of human information. // That means between now and late 2014, // we will generate as much information, // in terms of gigabytes, // as all of humanity has in all the previous millenia put together. // It's doubling every 18 months now. // This is terrifying because a lot of the big decisions we make / require the mastery of lots of different kinds of facts. // A decision like where do I go to school? // What should I major in? // Who do I vote for? // Do I take this job or that one? // These are the decisions / that require correct judgments about many different kinds of facts. // If we have those facts at our mental fingertips, // we're going to be able to make informed decisions. // If, // on the other hand, // we need to look them all up, // we may be in trouble. // According to a National Geographic survey I just saw, // somewhere along the lines of 80 percent of the people // who vote in a U.S. presidential election / about issues like foreign policy / cannot find Iraq or Afghanistan on a map. // If you can't do that first step, // are you really going to look up the other thousand facts / you're going to need to know to master your knowledge of U.S. foreign policy? // Quite probably not. // At some point you're just going to be like, // "You know what? // There's too much to know. // Screw it." // And you'll make a less informed decision. //

The other issue is the advantage of time that you have / if you have all these things at your fingertips. // I always think of the story of a little girl / named Tilly Smith. // She was a 10-year-old girl from Surrey, // England on vacation with her parents a few years ago in Phuket, // Thailand. // She runs up to them on the beach one morning // and says, // "Mom, // Dad, // we've got to get off the beach." // And they say, // "What do you mean? // We just got here. // " And she said, // "In Mr. Kearney's geography class last month, // he told us that // when the tide goes out abruptly out to sea // and you see the waves churning way out there, // that's the sign of a tsunami, // and you need to clear the beach. //" What would you do / if your 10-year-old daughter came up to you with this? // Her parents thought about it, // and they finally, // to their credit, // decided to believe her. // They told the lifeguard, // they went back to the hotel, // and the lifeguard cleared over 100 people off the beach, // luckily, // because that was the day of the Boxing Day tsunami, // the day after Christmas, // 2004, // that killed thousands of people in Southeast Asia / and around the Indian Ocean. // But not on that beach, // not on Mai Khao Beach, // because this little girl had remembered one fact / from her geography teacher a month before.

Now when facts come in handy like that // -- I love that story / because it shows you the power of one fact, // one remembered fact in exactly the right place at the right time // -- normally something that's easier to see on game shows / than in real life. // But in this case / it happened in real life. // And it happens in real life all the time. // It's not always a tsunami, // often it's a social situation. // It's a meeting / or job interview / or first date / or some relationship / that gets lubricated // because two people realize / they share some common piece of knowledge. // You say where you're from, // and I say, // "Oh, // yeah. // " Or your alma mater / or your job, // and I know just a little something about it, // enough to get the ball rolling. // People love that shared connection // that gets created / when somebody knows something about you. // It's like they took the time to get to know you / before you even met. // That's often the advantage of time. // And it's not effective / if you say, // "Well, // hold on. // You're from Fargo, // North Dakota. // Let me see what comes up. // Oh, // yeah. // Roger Maris was from Fargo. // " That doesn't work. // That's just annoying. //

The great 18th-century British theologian / and thinker, // friend of Dr. Johnson, // Samuel Parr / once said, // "It's always better to know a thing / than not to know it. // " And if I have lived my life by any kind of creed, // it's probably that. // I have always believed that / the things we know // -- that knowledge is an absolute good, // that the things we have learned / and carry with us in our heads / are what make us who we are, // as individuals / and as a species. // I don't know if I want to live in a world / where knowledge is obsolete. // I don't want to live in a world / where cultural literacy has been replaced by these little bubbles of specialty, // so that none of us know about the common associations // that used to bind our civilization together. // I don't want to be the last trivia know-it-all / sitting on a mountain somewhere, // reciting to himself the state capitals / and the names of "Simpsons" episodes / and the lyrics of Abba songs. // I feel like our civilization works / when this is a vast cultural heritage / that we all share / and that we know without having to outsource it to our devices, // to our search engines and / our smartphones. //

In the movies, // when computers like Watson start to think, // things don't always end well. // Those movies are never about beautiful utopias. // It's always a terminator / or a matrix / or an astronaut getting sucked out an airlock in "2001." // Things always go terribly wrong. // And I feel like / we're sort of at the point now / where we need to make that choice of / what kind of future we want to be living in. // This is a question of leadership, // because it becomes a question of who leads the future. // On the one hand, // we can choose between a new golden age // where information is more universally available / than it's ever been in human history, // where we all have the answers to our questions at our fingertips. // And on the other hand, // we have the potential to be living in some gloomy dystopia // where the machines have taken over / and we've all decided / it's not important what we know anymore, // that knowledge isn't valuable // because it's all out there in the cloud, // and why would we ever bother learning anything new. //

Those are the two choices we have. // I know which future I would rather be living in. // And we can all make that choice. // We make that choice by being curious, // inquisitive people // who like to learn, // who don't just say, // "Well, // as soon as the bell has rung / and the class is over, // I don't have to learn anymore, // " or "Thank goodness // I have my diploma. // I'm done learning for a lifetime. // I don't have to learn new things anymore. // " No, // every day we should be striving to learn something new. // We should have this unquenchable curiosity for the world around us. // That's where the people you see on "Jeopardy" come from. // These know-it-alls, // they're not Rainman-style savants / sitting at home / memorizing the phone book. // I've met a lot of them. // For the most part, // they are just normal folks // who are universally interested in the world around them, // curious about everything, // thirsty for this knowledge about whatever subject. //

We can live in one of these two worlds. // We can live in a world / where our brains, // the things that we know, // continue to be the thing that makes us special, // or a world in which / we've outsourced all of that to evil supercomputers from the future // like Watson. // Ladies and / gentlemen, // the choice is yours. //