[SQUEAKING]

[RUSTLING]

[CLICKING]

NORVIN RICHARDS: OK, now do you have any questions now that there's been a little more delay? Yeah? OK.

[SPEAKING WAMPANOAG]

So one of the things I was telling you just now was that the language that I was speaking had spent a long period of time, many years, in fact, more than a century, not being spoken at all. So the Wampanoag are engaged in trying to get their language spoken again. But they're fighting an uphill battle because they don't have native speakers to work with. They're having to work their way through documents to try to figure out how their language is spoken.

In being an Indigenous language of the US that has spent some time not being spoken at all, Wampanoag is not at all unusual. So all of the Indigenous languages of America are in some level of danger. UNESCO has a series of classifications for languages. There are sort of different levels of endangerment for languages, ranging from languages that are vulnerable, that is, languages in which there is some other dominant language around, but there are still children learning to speak the language-- that's the least level of concern--

all the way down to critically endangered languages. Those are the languages-- (I don't care that this Mac cannot connect to iCloud. Tell me later!) Those are the languages in which the youngest speakers are elderly. And they don't speak it all that often. And there are these ranges in between, having to do with how basically, how secure the chain of transmission to the next generation for the language is.

All of the Indigenous languages of this country are somewhere on this list. So they range from the languages that are merely vulnerable, all the way down to the critically endangered languages, which is most of them. So most of the Indigenous languages of this country are in some level of trouble.

Here's a map showing the counties in which-- this is census data from 2006 to 2010-- showing the counties in which there are numbers of speakers of Indigenous languages in different places. You can see there are a few places where there are large numbers of speakers. By far, the largest native language in this country is Navajo, which depending on how you count, has somewhere around 120,000 speakers.

The other success stories all have numbers of speakers ranging in the 10 to 20,000. So you can see some of the examples on the map there. You can also see that some of these languages are spoken in discontinuous places. So Cherokee, for example, has two communities where it's spoken, one in Oklahoma and another further in the East.

If you know anything about American history, you know why. So this has to do with the Trail of Tears, in which the Cherokee in the early 1830s were compelled to walk about 5,000 miles from their traditional homelands, which were in Tennessee and northern Alabama and northern Georgia, that area all the way to Oklahoma. Many of them died along the way. So not all of them went, I guess, which is why there are Cherokee speakers in two different areas.

So I just said, of those languages, the largest is Navajo. But although counting speakers is the standard thing you do to figure out the health, some kind of gauge of the health of a language, it's sort of a tricky thing to do for several reasons. One is that it's difficult to find out how many people speak a given language. Particularly for languages that are Indigenous or that are endangered, people have a powerful motivation to want to say that they can speak the language, even if they can't.

For a lot of these languages, there are also forces in the other direction. So a history of people being punished traditionally, being taken to residential schools and that kind of thing, in attempts to stop them from speaking their Indigenous languages have led people to want to lie in the other direction and say that they don't speak a language, when in fact, they do. This-- all of this makes it hard to count.

But however you count, Navajo is definitely the largest. But that doesn't make Navajo safe. So first of all, 120,000, is the upper range. If you're guessing how many Navajo speakers there are, it's somewhere in 170,000. That means that there are roughly as many speakers of Navajo in this country as there are of Malayalam or Albanian. So it's by far the largest Indigenous language.

But it's not large. So it's not English large or Spanish large. It's one of the larger languages, but not huge. And within the Navajo reservation, the Navajos have been keeping track of how many Navajo speakers enter, how many Navajos enter kindergarten able to speak Navajo. And those percentages have been dropping ever since they started keeping records. They're now somewhere less than half, which is bad news for the future. Even if the language is currently large, it doesn't mean it will continue to be large.

I've been talking about the United States, but the situation in the United States is not particularly unusual. So actually, if you just count languages, if you look at the languages of the world, most of them are endangered. So not the ones that you've heard of-- not English or Spanish or Mandarin.

But if you count languages, there are something like 6,000 or 7,000 languages in the world, and the general expectation is that we will lose at least half of them, and more pessimistic people think more like 90% of them, once this century is over with.

So here's a place to pause and ask-- we are in the middle of a shift. There are lots of languages in the world right now, and there are going to be far fewer soon. So the world is changing from a world with a comparatively large number of comparatively small languages to a world with a comparatively small number of comparatively large languages. I hope I got the small and larges right as I said that. I think I did. Bless you. That's what's happening.

How many of you think that this is a good thing? How many of you think that this is a bad thing? How many of you think that the question is too simple?

So those of you who think that the question is too simple or those of you who think that it's a bad thing, this is the part where I would like to hear from you. Are there-- and I always do this at the beginning of class. Where the heck-- someone is hiding the chalk from me. Not me, specifically, presumably, but from anybody who wants to teach here. Wow, they're doing a better job of it today than they usually do. So, usually, if I'm persistent, I can find some chalk, but not today, no. Wow. So no chalk for me today. I will just have to do today's class by interpretive dance. Wow. OK, no, I haven't hidden it under my stuff or anything like that. That's strange.

OK, so let's just talk, then. Those of you who think that this question is too simple, who thinks that there might be good things about-- oh my TAs are gesturing. Yeah, if you wouldn't mind, that would be great if you can find some. But for now, so Enrico is on the case. He'll bring me some chalk, if he can find it. What the heck?

Yeah, so those of you who think that there might be good things about language loss or those of you who think that there might be bad things about language loss, let's hear from you. What do you think? Why do you think what you think? Anybody wish to offer an opinion? Yes?

AUDIENCE: A lot of [INAUDIBLE] stories just get lost in translation.

NORVIN RICHARDS: So a lot of stuff-- I'm sorry, can you just say that again?

AUDIENCE: Stories can get lost in translation.

NORVIN RICHARDS: Stories can get lost in translation. Yeah, I think that's true. I have a favorite example of that, actually. Have I told you my story about the movie *Sleepless in Seattle?* This is one of the dangers of teaching similar classes is that you tell the same jokes over and over again. You lose track of what you've said. So when I was-- you're much more sophisticated than when I was your age. When I was your age, my thought about that was always, no, but stuff can be translated. I mean, I can't read Russian literature in Russian, but I can read it in English. And so if Russian were to vanish from the world, then we would still have the literature.

I think there genuinely is a phenomenon of stuff getting lost in translation, and I have a favorite example, which is from the movie *Sleepless in Seattle.* Has anybody here seen the movie *Sleepless in Seattle?* You have, wow, someone who loves the classics. So it's a romantic comedy from the previous century, and I'm about to spoil the ending, so if you're thinking about watching it, just know that you're about to-- I'm about to spoil the ending, but I don't feel too bad about it because it is a romantic comedy after all. And so it's not like it's ever unclear what the ending is going to be.

So the end of the movie-- the movie is about Tom Hanks and Meg Ryan's characters. They are destined for each other, but they live on opposite coasts, and so lots of wacky hijinks have to ensue before they can actually meet. At the end of the movie, they're meeting for the first time, really. They're having their first real conversation, and they're at the top of the Empire State Building, and Tom Hanks' son from his previous marriage is there too.

And after they have this brief conversation in which they've just met for the first time, Tom, at some point, says, "Well, we better go." And you see Meg Ryan interpret that as meaning that he and his son are about to leave and go somewhere, and it was nice meeting her, goodbye. And then he says, "Shall we?" And holds out his hand and she takes his hand and they walk off together. They go into the elevator. You can see Tom Hanks' son grinning broadly and the music comes up, and that's the end of the movie. There now I've spoiled the end of the movie for you, sorry.

So that moment, where he says "We better go," and she misinterprets him as meaning "My son and I are leaving now and you can stay here," and then it turns out that what he means is "All three of us had better go," that's a moment that relies crucially on the fact that English pronouns are vague, that the first person plural pronoun in English just means I, the speaker, and some other people. And it's vague about whether you, the person I'm talking to, is included in the group or not.

And there are languages out there in which that is not true. So in Lardil, for example, the language from Australia that I worked on, there's a distinction between what's called inclusive and exclusive we. So if Tom Hanks means to invite Meg Ryan along later, he's going to use the pronoun "lag-ri-mol."

And if he means to leave without her, it's going to be him and his son, he'll use a completely different pronoun, "yeddi." Lardil actually has eight different words for "we." It's possible to be extremely precise about who's in the group or not. There's another word for "we" he could use to suggest to her that she and he should now leave and his son can stay here at the top of the Empire State Building, which-- that would have been a different kind of movie.

So if you imagine a different kind of world in which Lardil had taken over the world, everyone spoke Lardil and English was this endangered language that was down to a few speakers and we were looking through its literature, which included this movie, *Sleepless in Seattle,* and we were going to see whether we could translate it into Lardil or not, well, this scene can't be translated.

So you want an example of something that gets lost in translation, here's an example. This scene relies crucially on an ambiguity. So the fact that the English word "we" is ambiguous in a way that can't be replicated in Lardil because Lardil has two different pronouns for those things. Does this make sense? And so if they're both fluent speakers of Lardil, and if she's paying attention, and-- there's just no way to replicate this problem.

So this is my pet example of something that is lost in translation. What gets lost in translation is all the stuff that skillful writers and storytellers do with relationships between words, basically. So cases of ambiguity or similarly phonological relationships between words-- so rhyme and alliteration and everything else that people do to create verbal art of various kinds-- none of that stuff survives very well. You can use footnotes to try to explain it to people, and that will work about as well as footnotes generally do.

So yes, if you're skeptical, as I was when I was your age, about the concept of anything being lost in translation, then yes, things can get lost in translation. I agree. It's a very long response to that point.

Anybody else wish to make points about this? Not about being lost in translation, but about language loss? Pro? Con? Yes?

AUDIENCE: I don't know whether this is a pro or a con, It's sort of the same thing. Languages are often used as reflections of what a community sees and thinks about the world and the culture that they come from and how they interact with the space and it kind of ties into the translation thing, where it's really difficult to capture that relationship that a certain language or culture has in the world when you're translating it into a different language. And if the original language disappears, then you sort of lose an entire perspective on life and events.

NORVIN RICHARDS: Thank you so much.

AUDIENCE: Which feels like a really significant loss to our general knowledge of the world.

NORVIN RICHARDS: So I'm going to call this "linguistically encoded cultural attitudes" or something like that. I don't know how to phrase what you just said, which you said so nicely that I don't want to try to put it in a bullet point on the board, and yet I feel that I have to. So we're talking now about some of the things that are lost-- bad things about language death. So we need a nice, neutral term for the phenomenon that we're talking about, so I'll call it language death, which is a nice, neutral term, it seems to me.

Are there any good things about mass language death that anybody wishes to talk about? Yeah, Raquel?

AUDIENCE: Well, this isn't a good thing about language death. It's just like, there are some situations where if you were, I think, speaking [INAUDIBLE] language that not many people know, then you get a lot of [INAUDIBLE] for mobility and integration with a more, I don't know, potentially profitable or helpful thing for you. If you wanted to get a job or go to a city where there's a lot more options for better living situation and learning that language, and it's like abandoning your own for the time being [INAUDIBLE] that makes your life better.

NORVIN RICHARDS: No, that's a very good point. And I should have come up with something to call it other than language death. That's absolutely right. Oh, pretty. So you're talking about one of the primary causes of language endangerment, and you're absolutely right. And in a sense, the fact that there is so much language death going on is a good sign of something that's happening, which is economic mobility.

That is, you're absolutely right that it is the case that people end up losing their traditional languages in part because their traditional languages are associated with an economically depressed area, and there's another language that's associated with economic opportunity. And so people end up switching to the language that's associated with economic opportunity. So am I parodying your point? I think that's the point you were making, which I think is a good one. That is something that happens. Yeah?

AUDIENCE: I think the issue that's [INAUDIBLE] whether or not it's good or bad that a language dies, but the method of which this is accomplished because I think it's not unfair to say that those kind of function of natural selection. If there's no reason to speak this language anymore, there would be no advantage to know this language other than, oh, it's cool that I know this language. I can speak it with basically no one. It's going to fall out, but whether or not this is my choice because the culture just decided to adapt and assimilate with others or whether this is by force because they were put in a situation where their language would have no choice to proliferate [INAUDIBLE].

NORVIN RICHARDS: Right. I'm going to put this in the good column, because what you're doing is talking about ways in which perhaps we shouldn't be so upset, and you just raised a good point to which I want to amplify a little bit. There are cases in which languages are endangered because there was another group that deliberately attempted to destroy them. So that's-- I alluded to that earlier.

So we've had this series of bloodcurdling discoveries about residential schools-- lots of graves of children at these schools where Indigenous children were sent in order to make them civilized and this is not ancient history. So there are still people alive today who are survivors of these schools and tell these awful stories about being punished for speaking their native languages.

And those events have consequences for generations to come. So there are elderly people today who I have heard talking about what it was like being a small child in these places where they were afraid for their lives if they spoke their native languages, the languages that they went into the school, in some cases monolingual in, and they spent the rest of their lives being frightened to speak their native language and unwilling to speak it. They didn't pass it on to their children, so those residential schools were very effective in their stated goal of eliminating the culture of the people that they were processing. That's a disturbingly common story.

So it happened in Canada. It happened in the US. It certainly happened in Australia. When I was working with the Lardil, I was working with people who remembered when there was a dormitory where children were sent and taken away from their families and kept there.

One consequence of that was that the people that I learned Lardil from were all old men, because when they had the dormitory system, they were more lax with the boys than with the girls. Perhaps some of you have heard people say this-- "girls are delicate and need to be protected," in this case from their families. And so the girls were kept under lock and key and never allowed to go home. The boys were allowed to go home sometimes. And so they learned some Lardil. The women of that generation were guarded more closely than that.

So that's one extreme, but then there's this other extreme, which is-- I guess you and Raquel have both now alluded to-- cases where you have a language and it's not currently under the kind of monstrous threat that I've just been talking about. But if you grow up in a community where this language is spoken, you can see that there's another language nearby that will give you more economic opportunity. And so you go for that one. That's the other kind of case to talk about.

There's some kind of relationship between these cases, of course. So it's often the case that the languages that were deliberately discriminated against, attempts to deliberately destroy them-- those are, then, the languages that tend to be economically depressed. There's some kind of connection between these kinds of cases.

And I guess we could ask-- so obviously, the choice to speak a different language than your native one because there's economic opportunity somewhere else seems more like a free choice than the choice to speak another language because you'll be beaten to death if you speak your native language. That's definitely more of a free choice. But it's not a completely free choice. You're being pushed in a particular direction by economic forces, it seems to me. Yeah, Faith?

AUDIENCE: This is a case of my own family, not necessarily just different languages, although that did happen with my grandparents' generation because they were hit for speaking Spanish in schools. But I don't know if you'd call it a dialect or just like the way that people speak. I know my mom and just my family in general, they speak a certain way. But when they're in a more professional setting that's not with family, they drop a lot of the characteristics of their speech that are natural. And I thought that was always really weird because it was like they're speaking a different language when they're in the home environment.

NORVIN RICHARDS: Great, and this connects to some of the stuff we were talking about earlier, about it being difficult to distinguish a language from a dialect, and maybe not worth it, that people have their own ways of speaking. And you're absolutely right, they feel the need to suppress them sometimes under professional circumstances. This is indeed the way that languages and dialects-- whatever those are-- become extinct.

I've heard-- there's a great activist for the Passamaquoddy language, a guy named Wayne Newell, who died a few years ago now, spent his whole life working to try to keep Passamaquoddy education going in the schools to the extent that Passamaquoddy is still spoken. There's a lot to thank him for. I once heard him give a speech in which he said that he could remember, as a child, a time when-- and so when he was a child, it would have been in the '40s, I guess, or the '50s when-- so Passamaquoddy is spoken in Northeastern Maine.

So he can remember, as a child, a time when racism directed at the Passamaquoddy was so bad that there was never any hope of Passamaquoddy people getting a job in the English-speaking world. So Passamaquoddy children were used as farm laborers. So they picked potatoes. So there was agricultural work for some kinds of people. But getting an office job in which you needed to be able to speak English-- that was just not in the cards for anybody from that generation.

And he said, now there is still racism directed at the Passamaquoddy, but it's nowhere near as bad. And it is possible for Passamaquoddy to become nurses and teachers and work in grocery stores and so on, which is obviously a good thing.

But the perverse fact is that when the racism was worse, there was a kind of protection for their language. Nobody was impelled to think, oh, if I speak English better, I'll get a good job. You weren't going to get a good job. It wasn't in the cards for you if you were Passamaquoddy. So that force was never in play. And he was saying, and now it is, thanks to something which is clearly a good thing, which is that Passamaquoddy people have the choice of a certain kind of economic freedom that their elders might not have had.

You all are making good points. Anybody else wish to make a good point? Yeah?

AUDIENCE: Does that 50% to 90% account for the possibility of bilingual divergence and dialects becoming [INAUDIBLE] spaces?

NORVIN RICHARDS: So one of the reasons that I say approximately 6,000 languages, and then I say 50% to 90%-- there are lots of reasons. One is that, as I said before, counting languages is kind of a fool's game. It's unclear what counts as a language. And another just has to do with how optimistic or pessimistic you are. I think the people who are making these numbers are not thinking about the generation of new languages-- so further dialectal divergence. And to be fair to those people, I think that's happening at a much slower rate than the rate at which languages are becoming extinct.

I guess another thing to say about that is that dialectal divergence and the creation of new languages-- it is indeed happening. There are even examples where we have it on videotape. For reasons of the calendar I ended up having to get rid of something, get rid of some topic to talk about, and I decided to get rid of signed languages, so I was going to do a day on signed languages and I had to take that out.

One of the things I would have told you about is the creation of Nicaraguan sign language, which is indeed a new language. It was created in Nicaragua, hence the name. When the Sandinistas took over-- so there was a revolution in Nicaragua, and for the first time, there were schools for the deaf. So prior to that, deaf people stayed at home and did what's sometimes called home signs. So they would develop sign languages of their own, interacting with the hearing people who were around them. When schools for the deaf were first created, you suddenly had all these deaf people in one place. And there's video of this happening. They created a language. So Nicaraguan sign was a new language that was created in the 1980s, and people saw it happen.

So there are cases of new languages coming into existence, but it's happening a lot less quickly than language death. Yeah, that's right. Are there points people wish to make about this? OK, cool.

One other reason, maybe, to care-- there is, in Indigenous communities, very serious-- so for a lot of the economic reasons that we've been talking about, but also for some of the cultural reasons that we've been talking about, there's a long standing problem with high suicide rates among the youth in a lot of Indigenous communities.

There was one study-- this was from 2007. I don't know if it has been followed up-- in British Columbia up in Canada, which established, I think to everybody's satisfaction, that there was a correlation between having a language that was comparatively strong-- so British Columbia has many Indigenous languages, all of which are in some level of danger, but the communities in which the language was comparatively strong were the languages in which the youth suicide rate was lowest. It was the communities in which the language was on its way out-- those were the languages in which it was highest.

You all are all scientifically trained, so it's reasonable now to wonder about the direction of causation, so whether it's the communities in which the language is strong are also the communities in which life is, in other ways, better, and so those are the communities in which the youth suicide rate is low, whereas if the language is on its way out, those are the languages in which the young are more likely to feel that their lives are hopeless.

Anyway, this is one kind of reason to care about this. There's arguably a life-saving possibility to having a language that is your own-- that is, being able to look at the world and think of it as a world in which, OK, maybe you are growing up in an Indigenous community. Maybe it's not an economically vibrant place, but you have something which is yours and in which you are the expert. There's apparently something about that, which is, as I said potentially life-saving. So just another thing to think about as we think about this.

Thank you for talking with me about this. I always feel weird asking people to speak frankly their opinions about this kind of thing. But in the years that I've taught this class, I felt less weird because I discovered that MIT undergrads are willing to speak frankly about their opinions, even if it's clear what their professor's opinion is, because the fact is that it's a very complicated question. There are all kinds of factors interacting with each other, and I think we've sketched some of them in a way that's useful.

One thing that we're doing in our department that I wanted to tell you about-- we have a master's program in our department. It's called the MITILI, the Indigenous Language Initiative, which I like to pronounce "mightily." It's a master's program for people from communities with endangered languages who can come to our department to get master's degrees in linguistics, the theory being that getting master's degrees in linguistics, the process of getting educated in that way, will help them with the creation of pedagogical materials, if that's what they want to do, or help them have the tools to analyze their language the way a linguist would.

So this program has been running for a number of years now. We currently have a Navajo student in the program and a Mi'kmaq student in the program, had a number of Wampanoag students and Passamaquoddy. We had an Inupiaq student. Next year, we have a student coming who's from a minority group in Bangladesh, the Marma, who speak a Tibeto-Burman language, which is severely underdescribed. So she's very concerned with the future for the language and wants to come and get some tools to help work on it.

So this is one kind of thing we're doing in our department about this worldwide fact. I guess one of the reasons that I'd like to spend today talking about this in this class is that when I tell people I have had this experience, that I tell people that there are many endangered languages, and the reaction I sometimes get is surprise. People will say, oh, I've heard of endangered species, but I didn't know there were endangered languages. So I didn't want any of you to come out of this class being like that. So all of you should know. There are many endangered languages-- in fact, most of them.

Shifting gears, I started this class by talking to you for a little bit in Wampanoag. I wanted to tell you a little bit about how that work has gone, like why I think I know how to pronounce Wampanoag words, even though we have no audiotape of native speakers pronouncing it. The big sources for Wampanoag-- there is a Bible translation into Wampanoag. It is the first Bible that was ever published in this hemisphere. It's a Wampanoag Bible that was published in Cambridge. First edition was in 1663, and then we work with the second edition, which is from 1685.

There's a colleague of mine here at MIT who tells me she has a friend at the Smithsonian who is sometimes called on to supply bibles for swearing in ceremonies. Like when the president is sworn in, they want the president to swear the oath of office on a Bible. And the Smithsonian is sometimes contacted to provide the Bible that President Lincoln used or something like that. And that they are sometimes asked for the first Bible published in the US. They always are like, no, no, you don't want that, believe me, because it's this one.

It was translated by John Eliot, who was a missionary from England who came here in the 1600s, who translated the Bible as part of an effort to convert the Wampanoag to Christianity, an effort that was successful in a lot of ways. They created a lot of Christian Wampanoag. There's a lot of documentation of the whole process, including these lists of the questions that they got asked as they were trying to spread Christianity to the Wampanoag.

One of the questions, I remember, was whether Jesus Christ had been baptized by full immersion or by sprinkling. I don't know why they wanted to know that. Another was why, if baptism cleanses people of sin, when we baptize our children, they asked, why do our children begin to sin again after they have been baptized-- and sometimes immediately after they have been baptized?

We don't have any record of the answers to these questions, but the questions are kind of interesting. Another question that they got asked over and over again was whether God, if the Wampanoag were to switch to worshiping God, whether God would protect them from the plague. So the Wampanoag were suffering from communicable diseases that were brought over by the colonists inadvertently, which wiped out-- it's another one of these large range of possible percentages of the Wampanoag, but there were entire towns that were wiped out completely. It's possible that the death rate was as high as 80% or 90%. It was just a catastrophe.

The Wampanoag weren't savages. They had an understanding of medicine that was at least as sophisticated as that of the pilgrims in the 1600s, which is to say not all that sophisticated, but they knew some stuff about how to treat people who were sick, and all of it was useless because they didn't have any immunity to what they were up against. So one very frequent question in these lists of questions is, will God save our lives? Will he protect us from the plague? And as I say, we don't have any record of the answers, and I wish I knew what they were told when they said that.

The Eliot Bible is a really interesting document. I have been reading it very slowly and carefully for years now, trying to put the language back together. It's also a document in which Eliot is clearly attempting not only to spread Christianity, but to suppress the existing religious beliefs.

This is one verse that kind of highlights that for me. This is a verse from the book of Exodus, so 22:18. If you're familiar with the Old Testament, it includes a lot of confrontations between the priests of the one true God and then priests of other religions that were there that were in the Middle East at the time, in which the priests of the one true God show that their god is more powerful than the other gods around there. This is kind of a recurring theme. The priests of the other gods are sometimes called priests, but they're often called other kinds of things. They're called like witches or wizards or whatever.

This is one of the verses that exemplifies the attitude you're supposed to have toward these people and you should kill them. So "Thou shalt not suffer a witch to live," or, in Wampanoag, that's [SPEAKING WAMPANOAG]. That last word, "pawaw," is actually the origin of the English word "powwow." So it refers to a person who was responsible for religious ceremony in Wampanoag-- so traditional religious ceremony.

When that word was first borrowed into English, it meant what it means in Wampanoag. So the earliest English citations of the word "powwow" are all about-- the powwows were getting together and doing their ceremonies. It refers to these people who were doing traditional ceremonies, people who, today, are sometimes called pipe carriers. So that's what this verse means. It means you should kill the powwows, the people who do your traditional religions. Not only should you ignore them, but you should let them die.

There's the Bible-- a bunch of other religious texts. So here's a catechism. There's a Wampanoag version of the Lord's Prayer and a bunch of questions and answers, which include things like "Why is God called"-- here's the first one. "Why is God called the father?" Well, because he created us and all people. And other texts-- Eliot created a logic textbook in Wampanoag.

Eliot, I mean, whatever you thought of his goal of eliminating Wampanoag religious beliefs-- maybe it's clear by now that I'm not actually a fan-- whatever you think of that goal, he went about it in the most sensible way possible. So he preached in Wampanoag, so he learned Wampanoag well enough to preach in it. He did a lot of visiting in Wampanoag communities, probably spreading diseases as he did so, but he didn't know that.

And he also ordained a bunch of Wampanoag ministers to go and spread the gospel among the Wampanoag themselves. So if he had been a different kind of person, he would have insisted that only white people educated in England could spread the gospel, but he was not that kind of person. He was the kind of person who wanted the locals to know enough to do the evangelism themselves. And that's what the logic primer was part of-- so the idea was if they learned logic, that would help them construct logical arguments and convince people to become Christians.

And I don't have an example here of this, I don't think. But it's an introduction to logic, as logic was understood in the 1600s, where the examples are all syllogism that involve proving things from the Bible. It's a very interesting document, and the result is that we know the Wampanoag word for syllogism, which I wasn't expecting to. It's on this page. It's [WAMPANOAG], which means a short speech, something like that, I guess because the point of a syllogism is that it boils something that would be a long argument down to its basics. That's why it's short.

And then there are a bunch of what are called native writings. These are documents that were written by Native speakers of Wampanoag, who learned to read and write. The literacy rate at one point was comparable to the literacy rate among the whites. The native writings are mostly legal documents of various kinds. So this is a bill of sale for a house, I guess where David Oks is selling his house and all that he has in this place to Isaac Tuhkemen. And here's the date and the signature and so on.

I wish that one of the native writings were a novel or a diary or something like that. But there's nothing like that. It's all stuff like this. Some of it is kind of heartbreaking to read. Here's a petition written by the people in Mashpee to the commissioners in Boston, asking them to intervene because the white people were taking their land. And it has lines in it like this one "Truly, we think it is this-- we, the poor Indians, shall soon not have any place to reside because these Englishmen--" by which they mean the white people-- "are troubling us very much."

They were wrong about this, actually, as it turned out. There are still Wampanoag in Mashpee. There's one place where they still live. So we have all these sources, but the sources, of course, are documents from the 1600s, which was a time when it was the mark of a gentleman, even in English, not to spell a word the same way twice. So the spelling is pretty erratic, and so we have to do a lot of detective work to try to figure out what exactly it was that they were writing down.

Some of the detective work involves discovering sound correspondences of the kind that we were talking about the other day when we were talking about historical linguistics. So we were saying one of the things that you learn is that when you have two related languages, it's possible to state these law-like generalizations-- wherever this language has this sound, this language has this sound. We can do this for Wampanoag. Here's Wampanoag compared with a closely-related Algonquian language called Delaware.

You can see from these data here, in the middle there, in the brackets, I have the spellings from the actual Wampanoag documents. And then, over on the right, we have the Wampanoag words the way that we spell them today, which you can see here is that wherever Delaware has a long "ah," Wampanoag has a vowel that sure looks like it's nasal. So the vowel is getting written with an "n" or an "m" next to it. So that word for "yesterday, we think is "wa-nonk-ial." Or we have "non-pee," which is again, or "skonk," which is skunk, or it's the word that we borrowed, one of the words that we borrowed.

So here are a bunch of examples where wherever Delaware has a long "ah," Wampanoag has what looks like a nasal vowel, and "aw," which we spell like this, an "o" with a hat on it. Wherever Delaware has a short "ah," well, it looks as though Wampanoag has probably something like a short "ah." So there's a vowel that gets spelled with an "o" or an "a." And so our guess is that this is also an "ah" sound. I was just complaining about the fact that the spelling is variable. Of course, the best thing would be if the Wampanoag documents were all written in the IPA. Then I would know exactly what they were spelling.

The fact that the spelling is kind of variable is, in a way, the next best thing. I mean, if they always spelled this vowel with the letter a, then I'd have to worry about whether they were spelling "ah," or "aaa," or "ay," any variety of things that we spelled with that vowel. But the fact that they spell this vowel sometimes with an "a" and sometimes with an "o" kind of narrows it down a little bit. I don't have to worry so much about whether it's "ay" or "aa." It's probably something more like "ah" or "au." So where a Delaware has a long "ah," Wampanoag has a nasal vowel, an "on." Wherever Delaware has a short "ah," Wampanoag seems to have an "ah."

Knowing that is handy when we're looking at words where it's hard to tell what kind of "ah" we have. So here's a very common word that means too much/excessively, and these are a bunch of Wampanoag spellings from the documents. And because the next consonant is an "m" it's hard to know, just looking at that spelling, am I looking at an "au" or am I looking at an "ah."

But thanks to Delaware, we know that it's an "au." So Delaware has a related word and it has a long "ah" there, and that tells us that this is Wampanoag "wusomee." And being able to figure things out like that then helps us figure more things out about how their spelling system works. So there's this ongoing process of putting together what the heck they're trying to spell.

We also think we know where stress goes in this word. That is, we think that the word is stressed on its second syllable. It's "wu-SO-mee." So it's not "WU-so-mee." And it's not "wu-so-MEE." And I want to tell you a little bit about how we think we know that because we've got a little bit of time left here.

This story goes back a little further. In 1640, the first book was published in the British colonies in North America. It was published also here in Cambridge. It's called the Bay Psalm Book. And it is a translation of the Book of Psalms into English metrical verse.

So here, for example, is the Psalm 1:1, the first verse of Psalms. So in the King James version, which is what those people would have been working with, you've got, over there on the left, "Blessed is the man that walketh not in the council of the ungodly, nor standeth in the way of sinners, nor sitteth in the seat of the scornful." The Bay Psalm book goes, "O Blessed man that in th'advice / of wicked doth not walk, / nor stand in sinner's way, nor sit / in chair of scornful folk." And it goes on and on like that.

The point of the Bay Psalm Book-- or here's the beginning of the 23rd Psalm, which some of you may know. So "The Lord is my shepherd. I shall not want. He maketh me to lie down in green pastures...." In the Bay Psalm Book, that one goes, "The Lord to me a shepherd is, / want therefore shall not I. / He in the fields of tender grass / doth cause me down to lie" and so on.

So this is another translation of the Book of Psalms into rhymed metrical verse. The idea was to create things that people could sing in church. So this was something that John Calvin had apparently proposed, the founder of Calvinism. He suggested that the Book of Psalms should be translated into English in metrical verse. I guess these were people who were a little worried that music might be sinful or might lead to sin, and so the idea was that if you allowed God to provide the lyrics, that presumably there were limits on how sinful you could be. So they had these translations.

The Bay Psalm Book was hugely popular. It went through many printings. It starts with this nice cute introduction in which they say something like-- because it wasn't the only translation of Psalms into metrical verse. They say something in their introduction like, you may, if you compare us-- I'm paraphrasing-- they say, if you compare us with other translations into metrical verse, you may notice that our poetry is not as nice as theirs, and that's because we were more concerned with literal accuracy. So it's not because we're lousy poets or anything like that. It's because we were shooting for being exactly the-- accurate to the original.

John Eliot, who later was one of the translators of the Bible into Wampanoag, was one of the writers of the Bay Psalm Book. So he was involved in the writing of the Bay Psalm Book-- one of several people who was.

Here's the Wampanoag translation for the first verse of Psalms. You've got it down there in the middle of this page. And as you can see, down underneath it, I have a literal translation of the Wampanoag words. And the only point to make here is that the literal translation of the Wampanoag words-- it's more or less a word-for-word translation of the King James Version in more or less the same order. So on the one hand, the fact that they were sticking to the English word order most of the time is generally true in the Bible translation, not just in Psalms. Sometimes, it's kind of frustrating. You wish that you-- because we know from other Algonquian languages that Wampanoag word order must have been pretty free.

One nice thing about it, though, is that when they diverge from the English word order, like when they put something in a place where it isn't in the English, that's more or less a very clear sign that the document is giving us that the English word order would have been ungrammatical in Wampanoag, which is kind of nice.

So usually, you can't learn that kind of thing from a document. A document just has a bunch of sentences in it and you can go through it and figure out which word orders are common and which ones are uncommon. In this kind of case, whenever Wampanoag doesn't do the English word order, the document is actually telling us, the English word order would have been bad, which is kind of nice. So this is the Wampanoag translation.

But at the end of the Bible, there's another Wampanoag translation. I'll just read it to you. It goes [SPEAKING WAMPANOAG]-- and so on and so on. It's another metrical translation of the Book of Psalms. Using the same rules, it's alternating long and short lines-- eight-syllable and six-syllable lines with the six-syllable lines rhyming with each other and the eight-syllable lines not. And it deviates from the English word order very seriously-- changes all kinds of things.

So when I first discovered this, I was looking through the Bible and I found this translation. I was like, oh, this looks like poetry. What is this? And I was like, oh, it rhymes, hot dog. And I thought, oh, cool, I'm going to learn something about how stress worked. So how do you know whether to say the word for too much. I think now it's "wu-SOM-ee," with stress on the second syllable. How do I know that? How do I know it's not stress on the first syllable or the third? Eliot also wrote in English a grammar of Wampanoag, in which he laid out the principles of grammar-- very sensibly, actually. It's a really nice document. He talks about a lot of things.

And one of the things he says very early on is I'm going to indicate stress because it's very important to put the stress in the right places in the words if you want to be understood. And he gives one example, the word for dog. He says the word for dog is stressed on its second syllable. It's "anum." And then he never mentioned stress again or indicates it anywhere else. And I could just kill him, except he's dead.

And so when I found this poem, I was like, "Ha, here's a place where I'm going to find out where the Wampanoag put stress-- what are the rules for Wampanoag stress?? And so I started going through, starting with the assumption that he was always getting the stress in the right place, which is false, it turns out. So if you start with that assumption, you pretty quickly come to the conclusion there are lots and lots of contradictions. He's not doing that.

And to be fair to him here, he is trying to translate the Book of Psalms into a language that's not his native language. He wants it to rhyme. He wants the words to be-- the lines to be the right length. He wants it to accurately represent, more or less, what's in Psalms. Meter is not-- it's somewhere on this list of priorities, but it's not the highest thing on his list of priorities.

So what I eventually figured out was there is something we can learn from the metrical Psalms, and I can illustrate this for you by going back to the English ones. So here's the beginning of the 23rd Psalm in the King James version and in the Bay Psalm Book. In the Bay Psalm Book, they've made various changes. So let's think about some of these changes.

Why did they change "I shall not want" to "want therefore shall not I?" Why did they do that? It's not the normal English word order. So that they ended up with "The Lord to me a shepherd is, / want therefore shall not I. / He in the folds of tender grass / doth cause me down to lie." Why did they want to change the order in that second line? Yeah, Joseph?

AUDIENCE: It has to do with the positioning and the stress in the words so that fits a poetic [INAUDIBLE].

NORVIN RICHARDS: Well, so they do that sometimes. In this particular case, there's something simpler that they're doing. Yeah?

AUDIENCE: I mean, it's "I" rhymes with "lie."

NORVIN RICHARDS: Yeah, they're setting up a rhyme. So they looked at the line and they wanted two things that would end in the same sound, and they decided on "I" and "lie." That's it exactly, for this pair. There's another place, though, where they do the kind of thing that Joseph is talking about. So "He leadeth with me beside the still waters." They change that to "To waters calm me gently leads," which has all kinds of entertaining properties.

But one of them is that the adjective "calm" comes after the noun "waters." Why did they say "to waters calm me gently leads?" Why didn't they say "to calm waters me gently leads?" And now we get to recycle Joseph's answer. So "to waters calm--" you get to put stress on the second and fourth syllables of that. Stress in English "waters" goes on the first syllable. And then you get to stress on "calm." If it were "to calm waters," well, then you'd have stress on the second and third syllables-- "to calm waters." Does that make sense?

So if you're trying to get a line in which you have alternating stresses-- which is what he's doing, he wants the stresses to be on the even-numbered beats-- then changing the order of the adjective and the noun makes sense. That's what you're shooting for. Does that make sense? That's what they're doing.

So I hope it makes sense because what I ended up doing was looking for things like that in Wampanoag, and I'll show you an example of what I found, and then I'll let you go. Here's an example from the King James version, from 22:16, "dogs have compassed me. The assembly of the wicked have enclosed me. They pierced my hands and my feet." And I'm bold-facing that because I want you to pay attention to it.

Here's the nonpoetic Wampanoag translation of that, which is more or less a word-for-word translation of the English. There's "dog" again, and I'm in the plural, "anumwak," in the first line. So "dogs have compassed me--" that means "encircled me--" "the assembly of the wicked have enclosed me. They pierced my hands and my feet." And that Wampanoag line ends with the Wampanoag words for my hands and my feet. And that's [SPEAKING WAMPANOAG].

But in the poetic translation they changed it to "my feet and my hands"? Why did they do that? Well, they didn't do it to set up a rhyme because the rhyming lines are the second and the fourth lines. And the first and the third lines don't rhyme with each other. It's the short lines that rhyme with each other.

So hypothesis-- they wanted them in that order in order to get the stresses in the right place. So if you imagine that the stresses go on the even syllables, there was something that he liked better about [SPEAKING WAMPANOAG], which is "my feet and my hands"-- that he preferred that to [SPEAKING WAMPANOAG]. So if you put stresses on the even syllables, that's where they would go. The word for "my hands," "an-netchi-tash," that gets the same stress in either of those possibilities. So this is just comparing "my feet and my hands" with "my hands and my feet." And we're asking, where would stresses go in those two versions of the line?

In the word for "my hands," which is "nuh-nuh-chi-kash," the stress is going in the same places in both of those versions of the line, so we can't learn anything about that word, where stress goes in that word, by this choice. It doesn't matter which of those things he did. He would have stress in the same place in the word for "my hands." But in the word for "my feet," what he's doing is choosing between "nuh-see-tash," stress on the second syllable, and NUH-see-TASH," stress on the first and third syllables. And he's choosing stress on the second syllable.

So hypothesis-- this is teaching us that stress actually goes on the second syllable of my feet, "nuh-see-tash." So if you are crazy enough to read the poetic version of the Wampanoag songs line by line, looking for verses where the word order has been changed in a way that doesn't help with setting up a rhyme, looking for things like this, then you end up with a list of words where you have a guess about where stress goes. And if you look at all of those words, you-- and I am in fact crazy enough to do that. I did it-- you end up with a set of words for which where stress goes, and you can develop a theory of where it goes.

It turns out the rules for Wampanoag stress are quite similar to the rules for stress in Delaware, which is the language I was showing you earlier. It's the kind of thing we could have hoped was true, but it's nice to see that it actually is true.

I'll show you one more slide, and then I'll let you go. Wampanoag is a polysynthetic language. Here's a letter from Experience Mayhew, who was another missionary who grew up on Martha's Vineyard. He was the child of missionaries who grew up on Martha's Vineyard, by his own account bilingual in English and Wampanoag.

We have one letter from him to a friend who had asked him various questions about the language. He begins his reply by apologizing for being slow to respond to the other guy's letter because several members of his family, including, I think, his wife and several of his children, had died from the plague. And he's like, "I'm sorry, I've been busy. But here are the answers to your linguistic questions."

And one of the points he makes is this language goes in for a really long words. The guy had asked him, I guess, for the longest word he could think of, and the one he came up with is down there at the bottom, "our well-skilled looking glass makers--" that is, our skillful mirror makers-- [SPEAKING WAMPANOAG]

So yeah, it's an extremely polysynthetic language. There's the break down for that word. Questions about Wampanoag or endangered languages or any of this stuff? OK, this is probably a good place for us to stop. So let's stop here, and I--