Session1 YOU

Part 1

(S)Today, I'm very happy to be talking with Professor Norma Field from the University of Chicago, who is actually the author of the main text of your reading material. Now, thank you very much, Professor Field, for joining us on this English 1 program.
(F)Thank you so much. It's a great pleasure for me, and I'm so glad you actually came to Otaru.

Part 2

(S)When I first read the text of your address, I thought that it was a very good message, probably designed to inculcate the students with the importance of society. But {er} after reading {er} some of Kobayashi Takiji's novels, knowing that you are an expert on them, I thought that the idea of individuality, or individual group dichotomy, might have come from your experience of researching into Kobayashi Takiji's literature. Is that true?
(F)Actually, no. It's the opposite! It's the opposite: {I had, I hadn't} I was very far from imagining then, that I might work on Kobayashi Takiji. {Um} So probably it's the person I was, coming up with that address, {um} that {um} led me to researching Takiji, and not the other way.

Part 3

{Um} I, I think that in that address, I was thinking that there's inequality in {ah} how much people are---young people, all of us---are encouraged to feel individual. Some, some people---some of us--- grow up being very much affirmed as individuals. Others of us do not. And there's a real unbalance between whether we feel totally free and self-determining, or feel utterly helpless and determined. {Um} neither of which, I think, is a very {uh} useful way to be in the world.

Part 4

{I'm a more} I'm a bleaker person now, than when I made that address. I find that {um} the values I was trying to communicate then {um} ---which I don't renounce at all---but I find it much more of a struggle to say, "This is what I think is truly important in education and beyond." So, what I'm beginning to learn now is {um} the importance, the responsibility, of being hopeful. Sometimes, I feel, being older now, that the world is not going to get better in my lifetime, and then I say, "But if you look at most of human history, its dark.." Most of human history is dark.. Our age is probably not outstanding,

in that sense. So then, what are the intellectual, and emotional, and {um} indeed spiritual kinds of discipline we need, to live with hope, which is, I think, and obligation we have to each other.

Session2 FAT

In the reading for today's session, Professor Naokata Ishii explained some of the exercise benefits of walking. And luckily for us, walking is one of the cheapest and easiest forms of exercise. But to get the benefits of walking for exercise, it's important to do it the right way. So we asked an expert, Professor Ishii's assistant, Ms Maiko Kudo, to give us some hints.

According to Ms Kudo, the most important point is to start with good posture. Proper posture is absolutely basic not just when you are walking or standing but also when you are sitting.

・It keeps our bones and joints in the correct alignment so that we use our muscles properly.

・It decreases stress on the ligaments holding the joints of the spine together. It prevents fatigue because with good posture we use our muscles more efficiently, and this means we use less energy.

・It prevents backache and muscular pain.

・It helps us look good!

Ms Kudo started out by showing us how to sit down and stand up smoothly and safely. Looks really easy, doesn't it? But do you sit and stand that elegantly? Then Ms Kudo moved on to standing. Here, she's demonstrating how we should stand with our chins tucked in, imagining a straight line running from our ears through our shoulders and down to our feet. Finally, she showed us how to walk properly. This turned out to be way more complicated than we'd ever imagined. Most of us slouch along without thinking much about it, but it turns out that there really is an art to walking well.

Ms Kudo said it was important not to bend forwards. We should look straight ahead, to a point about five meters in front. We should keep our arms balanced and moving naturally. When each foot hits the ground, we should make sure it's the heel that hits the ground first. OK so far? Right then, now let's focus our attention on the way our body weight shifts. We need to check that our weight is not being distributed unevenly, favoring the outer or inner edges of our feet. Our strides should be longer behind than in front. And if we find ourselves moving sideways or upwards and downwards that means the weight shift is not being done properly.

One more thing, don't take really long strides. If you want to walk faster, it's better to increase the number of steps you take than to lengthen your strides. Of course, there are other important elements besides posture to bear in mind if we want to make sure that our walking is effective exercise. We need to think about the correct way of

breathing and of course we should wear the right kind of shoes. So it's all a bit complicated. But as we learned from today's reading, walking is a great way to get into shape. And because it's something most of us do every day, we might as well try to do it right.

Session3 TRADITION

Hula has been an important part of Hawaiian culture for many generations. Native Hawaiians, both men and women, have been performing hula for centuries. This is, Mamina Koga, a former graduate student of the University of Tokyo, performing.Hula on Ala Moana Beach in Honolulu Hawaii. Ms Koga, who is a specialist in ethnomusicology, has been studying hula for more than five years. Hula looks easy, doesn't it? But actually it's not easy at all. It takes years' practice just to get the basic steps right. And learning the proper movements is only the beginning. Anyone who is seriously interested in learning hula also needs to understand its history and its cultural significance for native Hawaiians.

Today we usually see hula being performed to music to the accompaniment of ukulele or guitar. But in the old days, hula was the accompaniment to chanting or poetry. A chanter recited a poem, and the hula performance repeated and reinforced the chanter's spoken words through expressive body movements. Some chants celebrated the king and his family. Others prayed for a good crop, or welcomed visitors. Some were dedicated to gods and goddesses while others were love poems. The poems were chanted with drums, made of gourds or wood.

Sometimes only one man or woman would perform, but at the other times as many as two hundred people would be dancing in perfect unison. The performances trained very hard to make their hula performances perfect. They all lived in the same place, called halau, and they practiced together every day. In the halau, the dance movements were defined and taught by the master teacher or kumu hula, who made sure that the hula tradition would be preserved and handed down to the next generation of Hawaiians.

In the last two hundred years or so, since Hawaii's contact with the Euro American world, hula has undergone many changes. But in Hawaii today hula is still considered a vital aspect of Hawaiian tradition. For Native Hawaiians in particular, hula provides an important cultural anchor, connecting them to the traditions of the Hawaiian Islands. Anyone interested in understanding the culture and society of Hawaii has to try and understand the significance of hula. That is why Ms Koga has been studying hula for many years. Professor Yaguchi hasn't been studying hula for quite as long, so he thought it was a good chance to pick up some hula tips. Somehow, though, compared to the expert, he looks a little awkward, don't you think? His hips don't swing as smoothly as hers. His arms are not level. His head is tilted. His posture isn't very good at all. His steps are very uneven. And I have to say that I think his smile is far less charming. Well, it seems he has a long way to go.

Session4 MATHEMATICS

In march 2005, a German eye doctor with a keen amateur interest in Mathematics discovered after a 50 days search using his personal computer, what was at the time the world's largest prime number. A prime number is simply one that cannot be divided by any other number except one and itself. So, 21 is not a prime number, because it can be divided by three and seven. But three and seven are both primes, because nothing will divide into either of them. The primes are the building blocks of Mathematics, the numerical equivalent of atoms.

The prime number Dr. Nowak discovered was more than 7.8 million digits long, and was written as 2 to the 25964951st power minus one. When interviewed by the press, Dr. Nowak was reluctant to talk much about his discovery. But Simon Singh, the author of today's lesson, wrote in a British newspaper that this discovery was a big deal. He said that the discovery of a new biggest prime symbolized humankind's progress in confronting a challenge of epic proportions.

The Greek scholar Euclid has shown that "there's an infinite number of primes." But finding the primes becomes increasingly difficult as they become bigger. So, you can imagine how unusual Dr. Nowak's discovery of a 7,816,230-digit prime number was. Singh argued that it was such a major breakthrough that it deserved to be reported in the front page of any national newspaper.

Still not convinced of the magnitude of Dr. Nowak's discovery? What you may ask to this exploration mean? Well, prime numbers actually generates direct benefits to society. Prime numbers are used to encrypt messages. That is, to turn a message into a form, essentially a code that is unreadable to anyone who doesn't have a special key to decode it. The way the encryption is done today belies the strange property that multiplying prime number is relatively easy. What, for example, is 7×13? But working out what the two prime numbers are multiplied together to give a certain result is much harder. What two numbers, for example, do you multiply together to get 323?

Indeed, with very large numbers it becomes virtually impossible to solve such problems, and this leads to effectively unbreakable codes. Thanks to the mathematics of primes and these codes, it is possible for individuals to send credit card details over the Internet and for banks to transfer money securely. And thanks to primes, our E-mails can be encrypted and made safe from prying eyes. Prime numbers mean, that our privacy can be protected.

And if that isn't still enough for you, and if you want to have a more direct personal financial benefit, then primes can deliver again. RSA, an equiption cooperation in the

United States offers 20,000 dollars to anyone who can work out which two primes multiply together to give this number.

Session5 OBJECTIVITY

How do you prove that you are really you? When you take an exam at Komaba, you might be asked to put your photo ID on the desk. So you prove that you are really you with the photograph. But do you think your ID photo really represents you accurately and objectively?

In her controversial book on photography, the American critic Susan Sontag challenged the common assumption that photographs accurately represent reality. Sontag argued that in fact, the cameras rendering of reality must always hide more than it discloses. When we're reading a newspaper, we don't often stop to ask ourselves what a photograph might be hiding, avoiding, or distorting. For most of us, a photograph seems as real as a real view through some kind of real window.

But, do you think photographs accurately and objectively capture the reality of an event?

Well, part of the problem here is that it's just so difficult to define the meaning of reality. So perhaps a better way to approach the issue of the question of reality of photographs is to think of these visual images in the same way that Professor Fujigaki approaches numbers. Professor Fujigaki warns us that things seem to take on a life of their own when they're turned into numbers. And they stopped to seem objective. So she encourages us to be mindful of the process of approximation and the construction of hypothesis. Photographic images too, easily take on a life of their own and start to seem objective. So perhaps we should treat photographic images in the same way that Professor Fujigaki encourages us to treat numbers. What we should focus on is the process, not the product. We should be thinking about how a photographic reality is constructed.

So, let's think of how a photograph is made. Think for you do when you take photographs. What are some of the things that are involved in making an image? Maybe first, you identify an object or a scene. Are you taking a photo of a person, a tree, something else? And then, maybe you decide on the angle. Are you shooting straight ahead, to the right, the left, the back, the front? Next, composition. How are you going to arrange the objects? And then, cropping. You're going to crop the image, what are you going to include? What are you going to leave out? And finally, you're going to focus. What are you going to focus on?

Use just a few of the things. We all think about when we're taking a photograph whether we think about them consciously or not. And of course nowadays, with digital cameras, there's also the question of digital manipulation.

Using software, we can easily decide, after the photograph is already on our computer screen, how much to crop, what colors to emphasize, what a degree of contrast is going to be. Or we could even combine two or more images to make a composite image showing something that never really existed.

Just as numbers can make data seem objective, photographs can make visual data seem real. So in order to assess the reality, it's important to be highly conscious of the process by which those visual images were created.

Session6 SUBJECTIVITY

Every year in the autumn, the University of Tokyo has homecoming day. On our campus, Komaba graduates of all ages are welcomed 'home' for one-day visit. Here, some alumnae and family members have joined with faculty to attend a special homecoming day lecture and campus tour. They are learning about Komaba's rich variety of splendid trees and attaching new nameplates to some particularly notable specimens. The topic for today's session is subjectivity. We've been thinking about how difficult –indeed, how impossible—it is to really know what it's like to be someone else, to have someone else's experiences. It's even difficult to imagine being ourselves at different age. Can you imagine how different the Komaba campus might seem to you if you came to a homecoming day, 25 or 30 years from now? How different would it feel to walk through the main gate again, aged 40 or 50? Everybody's experience of the Komaba campus is surely unique. And our subjective perception of our surroundings changes as we ourselves change in age. But what about non-human life forms at Komaba? Have you ever wondered what the Komaba experience is like for one of our campus cats? Or even for one of our splendid campus trees?

Take this large white oak tree for example, the one facing the main gate. You've probably walked passed this tree hundreds of times. Have you ever tried to see Komaba from the perspective of this big oak tree? Have you ever wondered if it has its own tree-like awareness of all the human beings busily coming and going through Komaba's main gate? It might surprise you to know, that there are almost as many full-grown trees on our campus as there were our first year students. A survey conducted in 2003 recorded 2794 trees on campus, that were at least 10 centimeters in diameter. Maybe you know which high schools sent the most incoming students in your year. But do you know what kind of trees are the most common at Komaba? Can you guess? Well, the most common Komaba tree is the shuro, which is a kind of palm tree. In 2003, we had 473 shuro trees on campus. Another common tree is the icho, or gingko tree, which makes the central avenue a glorious golden yellow in autumn, and provides Todai with its current logo. In 2003, we had 134 ginkgo trees on campus. We also had 112 keyaki, or zelkova trees, 140 enoki or hackberry, and 144 somei yoshino cherry trees. At the other end of the scale, we had just 6 apricot trees, one venerable olive tree, and single pomegranate. Maybe for you, trees are just trees. But today, when you leave the class room, why not take a look around at some of our trees, and try to experience Komaba from a different perspective? Of course, it's not possible for us to turn ourselves into trees, even for half an hour. And there are serious philosophical complexities involved in

any attempt to imagine ourselves inhabiting the subjectivity of another person or life-form. But the effort of making that kind of imaginative stretch can give us a fresh perspective on things that we've come to take simply for granted.

Session7 VOICE

Professor Takumi Moriyama is a cultural anthropologist. One of the most important ways in which he can (　　) research is through personal interaction with the people he is studying. So field work is in important part of the academic study. From 1987 to 1990 professor Moriyama was involved in what's known as participant observation on the island of Madagascar. Madagascar is located off the coast of the African continent. The key point about participant observation is that a researcher participates in the culture he or she is also observing. The researcher , in this case　professor Moriyama, becomes immersed in the culture ,learns its　languages and takes parts in its everyday routines, rituals and activities. Professor Moriyama talked to us about the　time he spent doing field work in　Madagascar. One of the reasons I decided to study culture and　anthropology (was that I'd always be)　interested in questioning things that seems natural in self-evidence.　I thought that encountering different cultures and different people would give me a chance to understand myself and my own culture common sense in relative terms. One thing led to another by an ended up focus in the culture and people in Madagascar.

I lived on the island for three years. Sometimes cultural difference manifested itself in really obvious ways, like the time when I crashed my motorcycle and broke a leg. The villagers who came to help me insisted that I should be taken to straight to a traditional healer, who would work on my leg while praying to a various gods and ancestors. It was very difficult to decline this offer and get myself to the nearest hospital instead.

Usually, though, my experience of "difference" in Madagascar was not dramatic at all, but really quite subtle, not unlike the difference or distance I feel from my friends and acquaintances in Japan.

What I learned through my fieldwork was that it was wrong to define the people of the island as "completely other" just because they live so far away from Japan. At the same time, I also came to feel strongly that it was just as wrong to expect people who share my cultural background to act and think in the same manner I do. Difference and distance are not the same thing.

I learned many things about Madagascar while doing my fieldwork, but in the

end, perhaps most significant lesson I learned was not how to see myself relatively through my encounters with others but to reflect on the reasons why I want to see myself in relation to others.

Session8 GENDER

What exactly is stress? Well, there are hundreds of ways to define it, generally speaking, we can think of stress as a physical and emotional reaction within your body to an outside stimulus called a stressor. For example, your body reacts when the outside temperature becomes cold, or the quality of the water you usually drink everyday changes suddenly.

And stress is simply unavoidable as long as you are alive. The Canadian scholar Hans Selye, who proposed the theory of stress in the 1930s and is today regarded as the father of the stress field, once even argued that without stress there would be no life. In all our lives, then, there is good and bad stress, for example, having a particular ambition can be a positive stress. Everyone needs to have positive stress like this in order to lead a fulfilling and worthwhile life but there is plenty of negative stress too. This negative stress, which we call distress, can come from things like exhaustion or difficult human relationships, even lack of confidence.

Sometimes the same stressor can produce both positive and negative stress depending upon the individual who is experiencing it. For example, a determination to pass the University of Tokyo's entrance exam can produce positive stress and unable successful results for some people, but it can lead to too much pressure for others, even resulting in the failure of perfectly able and competent candidates.

We need to have a balanced amount of stress in our lives to be productive. People who have no stress often lack goals and dreams and don't do much exercise. People who have too much stress suffer from bad human relationships and overly busy lives. An appropriate amount of stress will make our lives more meaningful and enjoyable. As conscientious university students trying to balance the demands of your academic requirements and pleasures of social life, many of you are probably feeling too much stress rather than too little right now.

Even if you feel confident that you can manage your stress by yourself there are some easy and practical things you can do to ease the negative stress you may be feeling. One of Dr. Selye's suggestions is to divert our attention away from the cause of the stress. Of course, it's important to think about the issues that are affecting you, but it's equally important to have some time off.

You can practice giving your mind and body a break from stress in a variety of ways. In fact, one of the most effective but also easiest ways to manage your negative stress is simply to laugh. Laughing, some scholars suggest, is good for your autonomic nerves. It's also good for your stomach muscles, which are indispensable to your health. And in

any case laughing makes you feel happy and contented and diverts your attention from the negative stresses that may be affecting you. I don't just mean smiling or chuckling but really laughing. Have you laughed like that lately? Probably not. Let's try! Everybody, relax your face muscles now and laugh.

Session9 COFFEE

The reading for today's session touches on a wide range of places — from Cairo to Zagreb to Hamburg to Mexico. And it covers a wide variety of topics — from soccer to coffee to exchange rates to internet caf?s. Holding all of this together is the underlying theme of global flow and exchange. Professor Usui's round-the-world essay certainly raises some important questions about the globalization of agricultural commodities. But as this essay suggests, agricultural globalization is not only limited to actual products like coffee. The global circulation of products is closely tied to the global circulation of people, of technology, and of knowledge. Some of you may have noticed a small rice paddy near the Komaba Todaimae Station, right next to the Komabano Park. It's owned by a nearby high school — so some of you may even have planted and harvested rice there. Students from the high school have the chance to get some hands-on experience in rice farming right in the middle of Tokyo. This field is called the Kellner rice paddy. In today's reading, Professor Usui recalls how he once visited a caf? in Zagreb named after a famous German politician. Here in Megro, we can walk across the train tracks and visit a rice paddy named after a famous German teacher. Oskar Kellner arrived in Japan in 1881, in response to an invitation he had received from the Japanese government. He'd been asked to come to Tokyo to teach the latest theories in practical methods of modern agriculture at a newly established college in Komaba. Perhaps you've heard of Sapporo Agricultural College, where the famous Professor William S. Clark taught for one year. Komaba Agricultural College also played a crucial role in the development of agricultural science in Japan. It's the ancestor of the University of Tokyo's present Department of Agriculture. As a professor of agricultural chemistry at Komaba — teaching in English! — Oskar Kellner taught many promising students. Some of his students went on to become influential bureaucrats and scholars. They played an important role in setting the course of Japanese agricultural policy and science, in the twentieth-century. Kellner taught subjects that were not widely known at the time in Japan such as plant nutrition, livestock nutrition, plant physiology, and climatology. At the time, these subjects were regarded as cutting-edge science. It was taken for granted that mastery of these topics was essential for the development of profitable agriculture and therefore

for the establishment of a strong nation-state. Kellner believed that the latest scientific knowledge should be applied even to rice growing, which of course already had a long tradition in Japan — although not in his native Germany. During the course of his eleven-year career at Komaba, Kellner performed various experiments to determine the best water quality and fertilizer for growing rice. The results of his work here on this campus made a significant contribution to the development of rice growing in Japan. The Kellner rice paddy at Komaba is not only a direct legacy of his dedication to science and to his students. It also attests to the complexity and to the creative potential of the global circulation of knowledge, technology, products — and people.

Session10 POETRY

Aotearoa is a Maori place name. New Zealand is the English name for the same place. Aotearoa New Zealand is a place that has come into being out of history of mixing and negotiation. Like its dramatic landscape, full of life and movement. Aotearoa New Zealand today is a place that is visibly still evolving. Scholars today are energetically debating the history of the Maori settlement of Aotearoa. There's also an energetic debate going on today about the future of Maori Aotearoa New Zealand.

How should the Maori aspects of modern Aotearoa New Zealand be maintained and respected? For some people, the best way to maintain and respect Maori tradition is to tie its preservation and future development to tourism.

Historically, Maori culture has had a strong tradition of welcoming and guiding visitors and this tradition is being carried on today in places like the Auckland Museum, where visitors from around the world can study Maori's artifacts, watch performances of traditional Maori song, dance, and ritual, and interact with performers. Visitors are also warmly welcomed at Rotorua, a half days drive south of Auckland. Rotorua is famous not only for its geothermal activity, its geysers, mud pools, and hot springs, but also for its presentation of Maori culture and history. At the New Zealand Maori arts and crafts institute, for example, tourists can visit the carving school, Tewananga Wakairo, which is located next to a reconstructive Maori village. The village is usually called "Whakareawarewa." But its full length Maori name is a bit longer "Te Whakareawarewatanga O Te Ope Taua A Wahiao." The knowledgeable Maori guides and performers, who work at "Whakareawarewa," take pride in explaining for religion and traditions to visiting tourists.

Many Maori believe that welcoming and interacting with visitors is an integral part of modern Maori culture. Others, however, disagree. Some Maori people feel that their culture is being commercialized. To intend a commodity, something like a gun is packaged and sold. They think the way the Maori history is told at “Whakareawarewa" is over-simplified and superficial. Another criticism is that the Maori people whose culture is being commodified and sold to tourists have little control over the process themselves and benefit much financially. Some people argue, the Maori tourism is dominated by non-Maorian and nonlocal developers. Local Maori people are mainly involved as guides or performers and have little control over the Maori tourism industry as a whole.

Aotearoa New Zealand today provides us with a good example of the way unique places

come out the history and of mixing and interaction. History that are sometimes peaceful and sometimes not. Today's debates over the protection and promotion of Maori culture are an essential and creative part of the ongoing negotiation of Aotearoa New Zealand as a shed space. In the workshop of the carving school the students learn and craft. The tourists learn from the students. This small space of integrated welcome learning provides a nice example of a place in which the mixing of different interests and histories has been successfully negotiated.

Session11 VIEW

OK, this story-"The Fall Guy" from the Guardian newspaper asks us to address some pretty important questions. It invites us, for example, to address the questions, to address questions like: What is 'ability'? What is 'disability'? What is 'handicap'? And what do these things mean for the people concerned?

If you look at these pictures, on the video,[um] they show people communicating in Japanese sign language. [Um] can you understand what they're saying? Probably not. But there doesn't seem to be any way that they're not communicating, in a completely viable way, and the language that they're using gives them the chance to express themselves, in any way that they wish to.

Not being able to hear might be seen as a disadvantage by many people but that doesn't mean that deaf people are not able to communicate with each other.

There's a [mis] another misunderstanding about sign language, and that is that it's somehow inferior, it's gestural only. It doesn't [umm] have the same depth or degree and subtlety of meaning that [um...] spoken language has. But, let's have a look at that question, and look a little bit at the history of American Sign Language, ASL.

[Um] in 1816, is when the history of ASL really started. A young graduate from Yale University who was a Protestant minister, his name was Thomas Hopkins Gallaudet. He became interested in the education of deaf children and he wanted to find out as much as he could about teaching methods, and so he took a trip to Europe, where it was possible for him to study that kind of thing. And on his return to the United States, he set up a school for deaf children and it's this point that marked the beginning of the history of [Japanese-of, er, excuse me] American Sign Language. It's interesting to note that at its earliest stages, American Sign Language was fairly much a gestural language: the signs were fairly simple, the degree of subtlety, the range of meaning were relatively limited. But pretty soon, these signs become standardized, they become more compact, the degree and range of meaning become much, much wider and [er] soon it become equal to [er] spoken language in the degree and subtlety of meaning it could communicate with. [Um...it may be that]...if you look at people communicating in sign language now, [it's] it's difficult to tell what a sign means just by looking at it.

In other words, it's no longer just gestural. [Um] so, the association of form and meaning has become symbolic. And a fairly efficient definition of language is to say it's a system of symbolic communication-and that's exactly what American Sign Language and other sign languages are. But what about American Sign Language now? It's used

on a regular basis by [er] 500,000 native speakers, in the United States and Canada. It's taught as a foreign language in many American universities, so that students who are not deaf can learn American Sign Language and, through learning American Sign Language, they can learn about the culture of deaf people and learn about what they're interested in, the kinds of topics that are important to them. In other words, it's equal to any other foreign language.

Session13 SONG

Music, song and acoustic communication are major research themes for Professor Kazuo Okanoya and his team of graduate students. We visited the Okanoya Lab to learn more about the work being done there and to meet Professor Okanoya, his research team and the resident birds and animals. Here's a baby degu—just one day old. Here are some adult degus, getting a bit of exercise. And here's Professor Okanoya in the lab with some of his famous finches.

You probably remember from the reading that there's a difference between male and female finch distance calls. Talking to Professor Okanoya, we learned the reason for this difference. The distance call of the male finch covers a narrower frequency and shows a more concentrated energy than that of the female. There's no clear beginning or ending to the male distance call, and this makes it quite difficult to judge where the sound is coming from. On the other hand, the distance call of the female finch has a more scattered energy level, and a clear beginning and ending. It is quite easy to pinpoint where this kind of call is coming from.

When a male and a female finch are separated, the female bird doesn't move around much, but just stays still and replies to the distance call of the male bird. The male bird meanwhile actively searches for the female bird. So it makes perfect sense that the female distance call has to be more easily locatable than the male. We also learned a bit more from Professor Okanoya about jinaki calls and their specific meanings. It turns out that even the cheeping of chicks in the nest has a particular meaning. Not very surprisingly, what these little cheeping calls mean is—`feed me !' These baby birds are really quite loud, and their begging calls might attract predators to the nest, which would put the whole family in danger.

So parent birds work really hard to feed their cheeping chicks—not because they're devoted and loving parents, but mainly just to shut them up. The chicks who produce the loudest `begging calls' are also the chicks most likely to survive. Dying chicks are too weak to beg, and don't get fed. This all might sound disappointingly unromantic, but it certainly helps us figure out how begging calls developed in the course of evolution.

It may extreme to compare these kinds of jinaki calls with the words we use in human language. But they clearly do function as a form of communication. Birds seem to be capable of actively learning the meaning of jinaki calls. Some birds even seem to use jinaki calls to their advantage by deliberately making misleading or false calls. In one

case, for example, a bird sounded the alarm call in a good feeding area simply in order to keep it for himself. And in another reported case a bird sounded the alarm call and cleared the area of other birds so that he could mate with a female bird that was nesting there.

Well, we really learned a lot that day—thanks to Professor Okanoya, his graduate students and his finches!