

Community Discussion of Field Experiments in Western Alaska and Kamchatka

UAA Project “Salmon Harvests in Arctic Communities: Local Institutions, Risk, and Resilience.” NSF Award # 0729063

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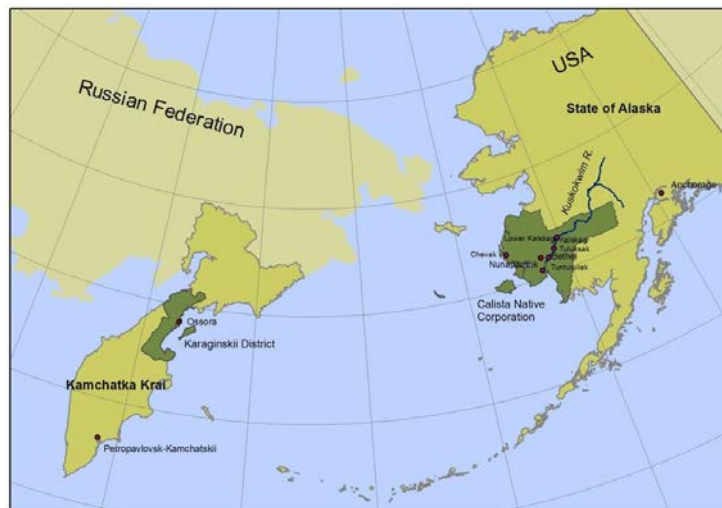
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Ethnographers conducting research with indigenous peoples of the North have repeatedly emphasized the importance of cooperation. People work together to hunt, fish, herd reindeer, and gather wild foods. They share these foods freely with one another, especially when people need help. This is how people in the North have survived—and thrived—in challenging and unpredictable arctic environments for generations.

Ethnography

The same is true in Kamchatka. At the beginning of our project, ethnographers from our team (Andrew Gerkey, Viktoria Petrasheva and Tatiana Degai) interviewed residents of Kamchatka Russia in order to learn about the importance of cooperation in the Karaginsky Region. They told us that they had experienced the challenges of their environment. One person recalled a truly “hungry year” when her mother made soup from last year’s yukola because the salmon arrived late and there was nothing else to eat. This was the lesson she learned in her own words: “That was a hungry year, but we worked together to survive. Separately you won’t survive.”

Map of the Study Region



Lessons in Alaska are similar. Dr. Colin West interviewed Yup'ik and Cup'ik people from Western Alaska communities along the Kuskokwim River. As in Kamchatka, people work together to harvest, process, and to share salmon. A middle aged man from Tuluksak said "... sometimes Nature doesn't provide. It doesn't give us meat. But there are other sources and where a person cannot catch, other families, will come in to give. Some people can keep it in memory that this person had give them some, and in return while they're not thinking about it, they'll give us something." People in the North work together and much of our research is directed toward gaining a better understanding of this cooperation.

Lessons about working together are an important part of indigenous culture. We are accustomed to think of culture as a set of material objects. We easily identify Koryak, Chukchi, Itelmen, and Even culture in their beautiful traditional clothing, harmonious melodies, and artistic dances. We celebrate this culture during important holidays like Khololo, the Day of the Reindeer Herder, and the Day of the First Fish. But it is also important to understand that the knowledge, values, norms, and ways of life that are passed down across generations are also culture. Our relationships to one another and the values that guide our actions may not be as noticeable as an ornamented kukhlianka or a traditional dance, but they are an equally important part of indigenous culture in Kamchatka.

Of course, culture changes over the years. Some changes are easy to explain. There was a time long ago when no traditional clothing in Kamchatka was decorated with beads. Instead, artisans combined different colors of fur to create beautiful patterns that are still worn today. When beads arrived through trade with people living far away, artisans in Kamchatka modified their traditional designs to develop beautiful new designs. Today, beads are an important part of traditional culture. Other changes, however, are more difficult to see. The values and practices that guide our relationships with one another also change along with social and ecological conditions. The lives we live today, the challenges we face, are often different than those faced by our ancestors. These changes are more difficult to identify and understand. An ethnographer cannot understand them by looking for the presence or absence of beads on a kukhlianka or malakhai. Instead, the ethnographer must spend time with people, participate in their lives, and speak with them about their knowledge and experiences.

Like Kamchatka, indigenous peoples of Western Alaska have continually adapted to social, economic and environmental change over millennia. For Yup'ik and Cup'ik peoples, a subsistence way of life is a cornerstone of their culture. Even though residents in rural villages can buy food at local stores, they prefer to go out on the land like their ancestors to hunt, fish, and gather wild foods. Unlike their ancestors, however, people today use snowmachines, four-wheelers, and powered boats to engage in subsistence. This modern technology costs money and not everyone has the financial means to buy gas, pay for nets, or repair broken machinery. Those who do share their harvests with families who don't have time or don't have the equipment to fully engage in subsistence. This sharing is an important part of daily life.

We have used these methods to understand the importance of cooperation in the culture and ways of life of indigenous peoples in Kamchatka. It is interesting how similar values of cooperation seem in comparison to other Northern regions, for example Alaska. However, it is difficult for ethnographers to understand why these similarities exist. Is it because the ecology of Kamchatka and Alaska are so similar? Is it because the economic conditions in rural villages in Kamchatka and Alaska present the same challenges? In order to answer these questions, anthropologists collaborated with economists who study the influence of ecological and economic factors on cooperation (Dr. James Murphy, Dr. Lance Howe, Dr. Todd Cherry, and Dr. Olga Bogach). By working with them, we hoped to understand how these ecological and economic factors interact with cultural values and practices, both in Kamchatka and in Alaska.

Experiment Design

Alaska and Kamchatka are home to different cultures with their own unique history. To make the comparison easier, we decided to conduct the same baseline decision-making exercises in Alaska and Kamchatka. This was our logic: If the exercise presents people with the same two dilemmas—the decision to cooperate and the decision to share—we can determine objectively if people have similar solutions to these two dilemmas.

Those of you who participated in this decision-making exercise last summer will remember that this was an entirely new and somewhat strange experience. We placed you in groups, provided you with some money, and asked you to make some decisions. We told you that your earnings at the end of the exercise would depend on the decisions you made, as well as the decisions made by other members of your group.

The first decision was to choose how much of your time you would contribute to a group activity and how much of your time to work alone in an individual activity. This decision is similar to one you make often in your daily life: you need to decide how often you want to work with other people to go fishing, hunting, and gathering berries. When people work together, they can accomplish more. So every hour you contributed to the group activity generated more resources than every hour contributed to the individual activity. However, when people work together, we know that sometimes one person does more work than others. Even so, when people work together they often share the resources they produce more or less equally. This situation leads to a dilemma: If people work together, they can achieve more, but if some people don't contribute as much as others, they may benefit more in the end than those who worked longer or harder. We think this is a dilemma that people face almost every day, not only in Western Alaska and Kamchatka Russia but throughout the world. Considering how important cooperation is here, we wanted to understand how people here solve this dilemma. Would the unique ecological, economic, and cultural characteristics of Alaska and Kamchatka lead to unique solutions? Or would the solutions be similar to other parts of the world?

The second decision was made immediately after the first. After people had produced resources by working alone or together, we asked people to decide if they wanted to

share their resources with other members of their group. We think this decision is similar to situations you face in your daily lives. Everyone has different abilities and needs when it comes to harvesting wild resources and earning money, but people often share the resources they produce and the money they earn with one another. People told us that this kind of sharing is an important part of surviving in Kamchatka. When someone is unable to fish because of illness or the fish they salt or dry spoils, they need help. People share their own food with them. Or maybe someone loses their job or is unable to find work. People might lend or give them money to help. The decision to share with other people in the group is similar to these situations. Just like the first decision—to work together or alone—we wanted to understand how the ecology, economics, and Yup'ik, Cup'ik, and Koryak culture influence people's solutions to this second dilemma: to share or not to share?

In the economics literature there has been much written about how people living in rural areas deal with risk in their daily lives. In urban areas people often have easier access to credit from banks, good insurance, better employment opportunities, and it is easier to sell goods if quick cash is needed. In contrast, in remote rural areas of Alaska and Russia credit is often more difficult to obtain, insurance is more costly or unavailable, and employment opportunities are very limited especially in villages. Consequently, people living in remote rural areas have to rely on more informal mechanisms like the sharing of food and equipment in order to overcome unexpected shortfalls in food or money.

Why is food sharing so common in Western Alaska and rural Kamchatka? Can voluntary food sharing be as effective as formal insurance? Is cooperation in food sharing related to cooperation in other activities? Can one identify conditions under which effective food sharing is more likely to persist? These questions are of interest to economists and other social scientists. We designed the decision making exercises to answer related questions.

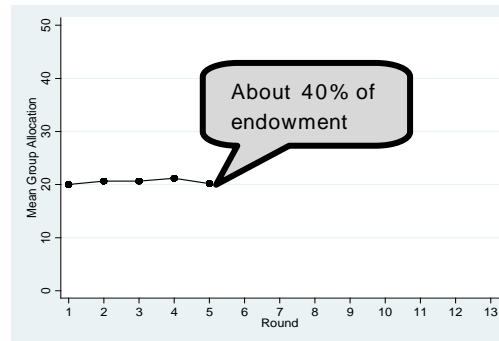
An exercise must be designed and implemented properly in order for one to test scientific hypotheses. For instance, instructions must be the same in every session and information given to the participants must be the same. If there are differences across sessions it contaminates research results. Therefore, the experienced researchers conducting the exercises have taken the utmost care to ensure the same protocol is followed in every session.

Experiment Results

We would like to briefly describe the results of these decision-making exercises we conducted in Kamchatka two years ago and in Alaska last year.

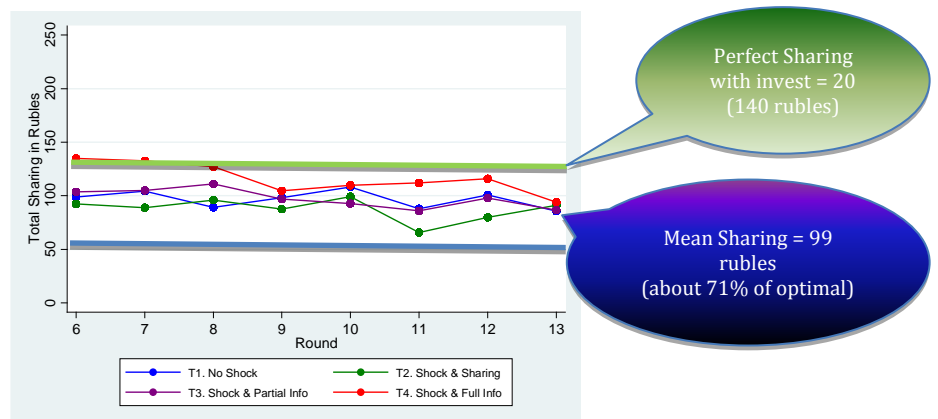
First, we found that people chose to contribute less than half of their time to the group activity. We can interpret this result to mean that people in Alaska and Kamchatka are willing to work together, but that cooperation has limits. Working together carries some risks. If people contribute all their time to the group but others do not reciprocate, then that person will end up with much less. So people appear to hold about 60% of their time for individual activities as insurance, then contribute 40% to the group. This result is similar to many other places throughout the world, where people have participated in this same exercise.

Figure 1. Average investment in the group activity



Second, we found that people were very generous in sharing with other members of their group. In particular, people often shared large amounts of their own resources with a group member who was in need of help. In the experiment, people who needed help had experienced a random “shock” that lowered their earnings from the individual and group activities to zero.

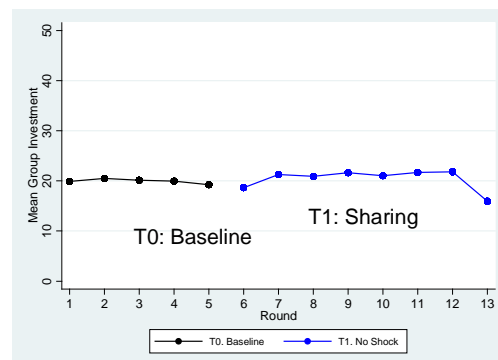
Figure 2. Average sharing across treatments



In our opinion, this result shows the importance people place on the value of sharing with people. People in Alaska often described these values when we interviewed them about cooperation, and we even witnessed these acts of sharing while participating in your daily lives during our visits to the village. Therefore, it is exciting for us to find the same actions in this decision-making exercise. But how can we understand sharing? What ecological, economic, and culture factors might explain the importance of sharing in Alaska?

Third, while people are willing to share in the game, sharing does not seem to lead to more cooperation in

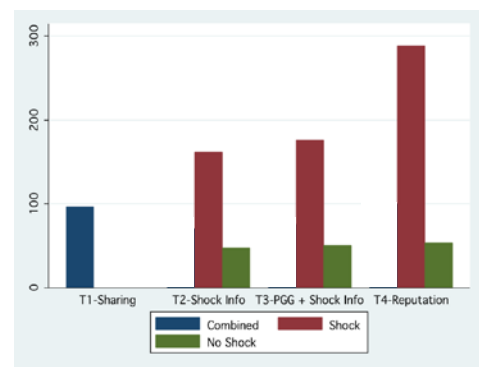
Figure 3. Average investment in the group activity



the group activity. Although people in Alaska and Kamchatka are willing to give money away to help someone who has experienced misfortune they aren't willing to contribute more to the group account. Again, the optimal strategy is for everyone to contribute everything to the group account because the return is double. This puzzles us ... do you have any explanation for this result?

The design of our exercise can help us begin to answer these questions about sharing. In some versions of the exercise, people made their decision to share after they learned how much time each group member contributed to the group activity. In these versions, people shared more resources with the person in need when that person contributed more time to the group activity. We interpret this result to mean that a person who cooperates with others acquires a good reputation, and this reputation affects how willing people are to help that person when he or she is in need. Of course, people still help a person even if he or she does not have a good reputation for contributing to the group activity. They even help a person when it is impossible to know how much that person contributed to the group activity. However, when a person's reputation is known, and that reputation is good, this person always receives more help.

Figure 4. Sharing by type of recipient



In Alaska, we also ran exercises that allowed for communication, or talking, during the experiment. In general we found that communication significantly increased cooperation with respect to investing in the group activity. Sharing was also much higher on average in the communication sessions. We are in the process of analyzing transcripts to help us better understand the strategies that people used to make decisions in the game. Other researchers have also found that communication generally has a strong positive effect on cooperation.

Figure 5. Investment with and without communication

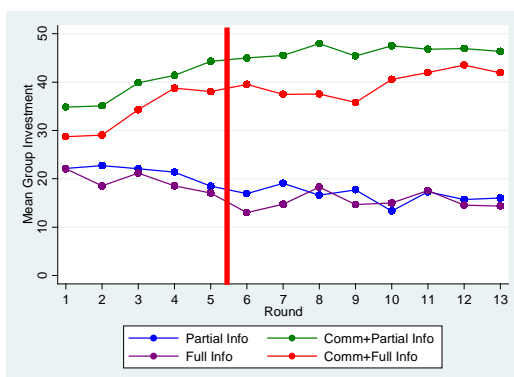
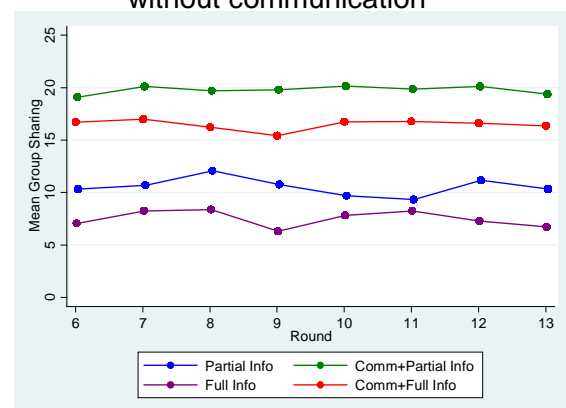


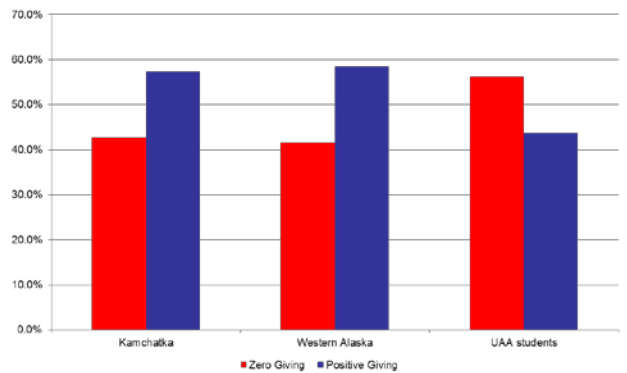
Figure 6. Sharing with and without communication



Finally, some of you may recall that at the end of each exercise participants had the opportunity for one last sharing exercise. Everyone was compensated for spending time in the experiment and given an opportunity to anonymously share with another person outside of the experiment. There were five classes of people and each participant was randomly assigned the option to give to either i.) a person in need from the same community; ii.) a person in need from another community; iii.) a random person from the same community; iv.) a random person from another community; v.) a person the participant selects from their community.

As shown in the figure, more participants from Alaska and Kamchatka gave something to someone else compared with students from UAA. About 60% of participants from Alaska and Kamchatka gave away earnings while only 40% of UAA students gave away earnings.

Figure 7. Percent of total earnings given away



We also found that in Kamchatka, mean offers decline toward people outside of the community (we call this social distance) but offers are not as affected by need. In contrast, in Alaska, offers increase with the need of the recipient (more needy recipients receive more) but offers are independent of where someone lives (i.e. social distance). Finally, in both Alaska and Kamchatka, those who give away more in this last game are more likely to give more to the shock victim in the investment game.

Figure 8. Kamchatka: % of total earnings given away

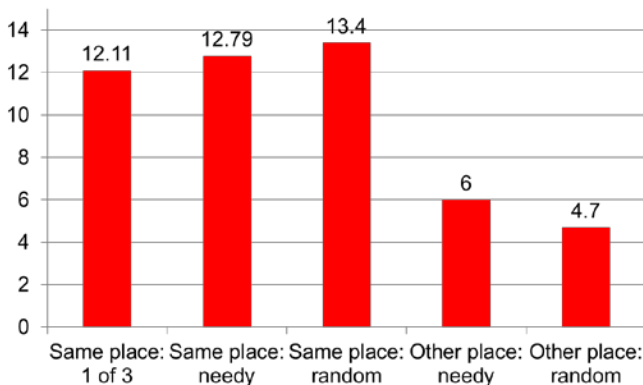
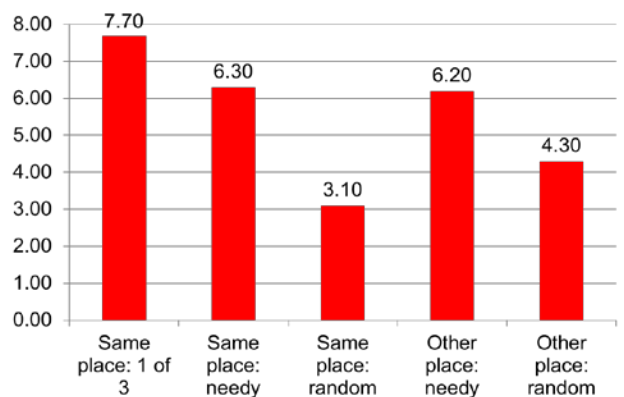


Figure 9. Western AK: % of total earnings given away



Risk-Pooling in Western Alaska and Kamchatka

One reason cooperation is important is because it helps people adapt to environments with risk and uncertainty. We can never know when we will need the help of others. One day I may have enough resources and money to feed myself and my family. A few months later, I may not. By working together and sharing with one another, people can

overcome these ecological risks. Ethnographers and Economists call this kind of cooperation “risk-pooling.” In order for risk-pooling to work, people need to know that they can trust one another to provide mutual aid. It can be costly for a person to share with another. The person who shares may worry that he will not have enough left to support his own family. But as long as the person who shares can trust the person he helps to return the favor when their fortunes are reversed, it makes sense to share.

Many of the statements people in Western Alaska and the Karaginsky region of Russia made about the role of cooperation in their lives indicated to us the importance of risk-pooling. The results of our decision-making exercises also show that people’s actions are influenced by these values and experiences. But how do we compare these values and actions to other parts of the world? Are they similar across Alaska and Kamchatka, where ecological, environmental, and cultural conditions are similar?

Significance

We are still in the process of analyzing and interpreting these results, so we do not want to offer strong conclusions about the significance of our research. We can say that the similarities in behavior between Kamchatka and Alaska in our experiments seem to reflect similarities in the cultural values, norms, and ways of life in these two places. The interviews we conducted in both places also feature similar values and norms. We think that the environmental and economic similarity between Kamchatka and Alaska is one important factor that explains this similarity. However, there are certainly other factors, and we are probably a long way from fully understanding them.

What do you think? One reason we wanted to share our results with you today is to learn how you would interpret them. Why do you think people chose to contribute about half their time to the group activity? Why do you think people chose to share more with those in need? Why do you suppose cooperation in the sharing dimension of the game doesn’t lead to more cooperation in the investment part of the game? Why do you think a person’s reputation for cooperating affected how much people shared with them? If you have any ideas about the answers to these questions, we would be very glad to hear them. We know that we still have a lot to learn about life in Western Alaska and Kamchatka. We thank all of you who have participated in our project for helping us learn, and we look forward to learning more through our work with your community in the future.