Poisoned Food:
Cultural Reflections on the Contaminants Discourse In Northern Manitoba ©

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Abstract. The discourse on contaminants in Arctic communities, at first glance, appears to be one that is specifically grounded in scientific discourses about external threats to a traditional way of life. Scientific research suggests that traditional foods harvested by the Inuit, although contaminated, continue to provide nutritional value, but require on-going monitoring and, if need be, limits on what can be consumed. This discursive formation is what we call a form of "contaminant" bio-power; that is, it delimits the total understanding of risks and benefits of Inuit country food to that of science alone. By doing so, Inuit perceptions of risks and benefits generated through their traditional knowledge have been excluded. This paper illustrates that the Inuit have their own discourse on "poisoned food" which they use to resist the totalizing effects of scientific discourse. This analysis suggests that environmental health risk communication strategies cannot be grounded in a public health system strictly dominated by scientific discourses. Counter-knowledge, as a form of resistance, will eventually minimize or exclude any risk communication activity that causes a person to worry too much or creates problems over which one has no control. The source of these insights were informants from three Inuit villages in Nunavik, Quebec (Canada) who participated in a risk perception study; a study which is one component of a much larger contaminants project conducted in the Canadian Eastern Arctic.

Introduction

In February 1994, a headline titled “Inuit Diet Polluted, Scientist Reports” appeared in the Winnipeg Free Press following a Circumpolar Eco-systems Conference at the Churchill Northern Studies Centre in Northern Manitoba (Canada). The content of this article opened with comments concerning the dilemma facing scientists who study contaminants in the Arctic and then communicate those risks to Inuit who consume country foods such as beluga whale, seal, caribou, fish, and birds. One highly respected biologist stated that “it’s hard to know what to tell people” about contaminants. He indicated that the food they eat has contamination, but it’s the “most healthy food available.” The article then abruptly ended with the following statement reinforcing scientific concern over the body burden of contaminants in the Inuit; “mercury is also elevated in human hair samples from the coastal communities in the eastern Arctic.”

These statements, together with others reported at scientific meetings and in journals, resonate with a well intentioned concern over animal and population health. In the Arctic, scientists are genuinely interested in the protection of the environment and maintenance of human well-being, and express a desire to educate populations, through public health advisories, on the risks and benefits of country food to health. However, these acts of benevolence can have a limiting effect on the populations involved (Foucault, 1976).

As scientists, we constitute “people and the environment” as an area of investigation and object of study. People and animals become units of analysis over which we can exercise power through our scientific and philosophical techniques of knowledge production and procedures of discourse (Simons, 1995). In a manner of speaking, we exercise a form of bio-power (Foucault, 1976). In the Arctic, some sources of bio-power are scientific disciplines like bio-toxicology, nutrition science, environmental epidemiology, or any other discipline that designates environmental integrity as a focus of interest (e.g., anthropology, sociology, physiology, or philosophy). In each of these disciplines, there are systems of knowledge that invest in and exercise power over something specific. In the works of Barrie et al (1992), Kuhnlein (1994) and Dewailly (1994), for example, discipline-specific statements of contaminants pathways, nutrition quality, and descriptions of contaminants are presented, but since these discipline-based discursive formations are largely counter-intuitive, they delimit the totality of what can be known (Foucault, 1963).

Imposing discursive limits by no means suggests that researchers intend to oppress populations through the language of their discipline. These researchers have good intentions,

and think well of the people with whom they have formed collaborative working relationships. However, we must fully appreciate that the scientific disciplines, from which these perspectives emerge, largely define the mode of being of the objects that appear in that field (e.g., omega-3 fatty acids of marine mammals) and construct seemingly everyday perceptions of contamination with ontological theoretical power (e.g. contamination falls within “acceptable levels of risk”). Our disciplines also define the conditions by which we can sustain a discourse on what should be recognized as true (e.g., academic meetings and journals).

The assumptions we make within our disciplines (epistemes) also elevate particular “scientific perceptions” to the level of objective knowledge (Foucault, 1981). For example, we now believe that the breast milk of Inuit women may contain high PCB concentrations, a perception based largely on one or two studies, limited in time and space. (Ayotte 1995; Dewailly et al., 1994). Yet most scientists would acknowledge that these assumptions are largely historical, and may change considerably over time (Simon, 1995). In the past, for instance, many of us experienced the Arctic as a fragile, yet “pristine” environment. However, most environmental scientists now view it as a sinkhole for potentially toxic organic compounds; acids, metals and radionuclides transported to the Arctic by air and water currents from agricultural, industrial, and military sources (Wormworth, 1995). Of these, PCBs and chlorinated pesticides have been designated as the most insidious by nature; the highly lipohilic and persistent nature of PCBs and chlorinated pesticides cause them to accumulate through ecosystems in the lipid-rich tissues of long-lived animals (e.g. polar bears, whales and seals) at the top of the food chain (Barrie, 1992). As a result, scientists have been working on quantifying estimates of global emissions, coupled with studies of chemical and physical behaviour in the environment, to expand their understanding and to provide evidence that would support national regulations and international policies to control emissions at the source.

However, as these disciplines examine the transportation and persistence of contaminants in the Arctic, the Inuit have been impacted not only by the presence of contaminants, but also by scientific risk communications. Such impact has resulted in Inuit organizations formulating their own positions on contaminants by reinforcing the importance of Inuit traditional knowledge. A recent speech made by Inger Egede (Inuit Circumpolar Conference) at a nutrition, environment and research workshop held in Nuuk (Greenland), illustrates their concerns over scientific research and communications and also reveals an interest in Inuit control over the contaminant discourse of scientists (1995):

Environmental contaminants coming to us from the south are a serious threat to the Arctic environment, to its living resources, to Inuit and to other indigenous peoples. These substances come into our lives through our diet. They strike at the very heart of Inuit society and culture, at the basis of our way of life.

It is sometimes said 'That you are what you eat.' If this is true, then those who eat Inuit foods must be Inuit. Our foods do more than nourish our bodies. They feed our souls. When I eat Inuit foods, I know who I am. I feel the connection to our ocean and to our land, to our people, to our way of life...

When many other things in our lives are changing, our food remains the same, and they make us feel the same as they have for generations. Maybe that is even more true today, since we see so many influences from outside, and we think more often about what it means to be an Inuk...

Let me just mention that the upbringing to hunting, the hunt itself, the upbringing to be a hunter's wife, the processing of food, the sharing of meat -- all are to be seen as a social glue that shapes our minds, our feeling of belonging to a society...

We know that the threats are many: they are physical, they are mental and they threaten our cultural well-being. You must also remember, that we are subjects to other kinds of contaminations: these come from animal protectionists, exemplified by indirect trade barriers to our seal skin market, to the restrictions on our whaling...

We need to monitor contaminants in our food, to watch for their impacts on our resources and on ourselves. But we must also weigh these potential risks against the known benefits of our foods...We must remember that changing our way of life has its consequences. <u>We must not let the fear of contaminants cause more problems than the contaminants themselves.</u>

This concern over communications and control over research is a trend reflecting the shift to Aboriginal self-government in Canada. For example, Mesher (1995), reporting for the Inuit organization of Makivik (Nunavik), interpreted these statements as "an appeal for Inuit not to become overly anxious or worried about the effects of environmental contaminants in Arctic country foods," but to understand that the Arctic is an "early warning system" to this problem and that "Western science and Inuit knowledge must work together to find solutions."

This paper further speaks to this appeal for Inuit not to become overly anxious by acknowledging the resiliency that Inuit knowledge provides in limiting impacts on their food and in creating the basis upon which collaborative relationships can be developed. It draws upon data produced through a risk perception study recently completed with the participation of three Inuit villages in Nunavik (Quebec). The study looked into the traditional knowledge of the Inuit concerning food risks and benefits. Our findings suggest that there exists a form of Inuit "contaminants" discourse and that this knowledge acts to delimit the impact of scientific statements which may describe their food as contaminated (i.e., poisoned), but nutritious. By

delimiting that impact, Inuit knowledge creates a form of bio-power resiliency to the “poisoned food” discourse produced by science and perpetuates instead the belief that country food is both a curative and preventive agent in Inuit conceptions of health and well-being.

Study Design and Methods

This study documented Inuit perceptions of the risks and benefits associated with eating various kinds of food. It described: 1) Inuit ideas about recognizing problems in the hunting and preparation of food that could result in health risks, 2) Inuit concerns about environmental problems that may threaten the value they place on country food; 3) Inuit ideas about the value of eating different kinds of country food; and 4) Inuit perceptions of the risks and benefits associated with eating store bought foods. Inuit members of the Nunavik Health Board helped focus our study and convinced us that risk communication could not happen unless we better understood how Inuit perceive the risks and benefits of their own food.

The seasonal availability of mammals and birds determined our choice of communities. We selected, with the assistance of an Inuit field co-ordinator, the villages of Ivujivik, Quaqtaq, and Kangiqsualujjuaq because they geographically represent a wide range of food consumption patterns in Nunavik (Quebec). Ivujivik is near an important hunting area for walrus and beluga whale. Quaqtaq is located along the migratory route of the beluga whale. Kangiqsualujjuaq is a community known throughout Nunavik for its access to a large local caribou herd. Overall, subsistence harvesting continues to be important in all these villages.

Ethnographic interviews, conducted in each of the villages, occurred over the months of January, February, and June of 1995. A flexible interview schedule, prepared and amended as circumstances warranted, helped ensure that the interview covered the many thematic areas of the study while proceeding in a conversation-like way. Both older and younger community members participated in the study to extend our understanding of perceptions across generations. Community translators/interviewers conducted the vast majority of the interviews in Inuktitut, and then translated them with a member of the research team. A public Hunters and Trapper’s meeting was also attended by members of the research team in one of the villages.

Inuit Knowledge of Niqituinnaq

At the meeting mentioned above, a territorial government biologist was interested in recruiting hunters to assist in a study looking into a possible outbreak of brucellosis in seals. However, the

discussion at the meeting upset some of the hunters in that they were left with the impression that the caribou were also sick. Most decided not to participate in the study which suggested that they were uninterested in trying to resolve the problem with the seals. On our return visit to the village two months later, several interviews with hunters who participated in the meeting clarified the real meaning of this "disinterest". It was clear that the biologist's suggestion that "Inuit food" was somehow unfit to eat was an unacceptable premise for the hunters. Citing the tradition of *Inummarik* (Genuine Eskimo), the hunters maintained that they, as Inuit, knew what was not good to eat. Nothing in their experience would suggest that *Niqituinnaq (real or natural food)* was unfit for consumption; any suggestion otherwise was simply not a possibility. Given the "unreality" of the biologist's information, participating in his project was impossible.

For Inuit, *niqituinnaq* is meat, and it is their typical, regular food which they strongly associate with good health (Borré, 1994; Nakashima, 1995) and the meaning of *Inummarik* - to be a Genuine Eskimo (Brody 1976). Men and women, both young and old, often spoke of this virtue of *niqituinnaq*; food from which they cannot be separated:

> *Country food is preventing you from diseases. Therefore it is a medicine. When you are sick and you are trying to gain back your strength, you eat country food. It's your medicine.*
>
> *I like all country food even if they are raw, cooked or fried because I am Inuk. That is why I like it so much. I like it better than qallunaat food. The one that I like the most is the seal when it is raw. It like it a lot. Everything about niqituinnaq is good. I just like them.*
>
> *I eat whatever I like. All of it helps the body...We eat with our way of life.*
>
> *For the old people, the food for them is real food - strong food like ignuak [fermented meat], seal, and all kinds of country food, and when they didn't have it for a long time, they start craving it ... It's their way of life. That's why old people start craving it.*
>
> *We are not disgusted by our food. We eat because we like it. We cannot be separated from our real food because it is a real Eskimo food.*

Inuit conceptions of *Niqituinnaq,* that fall within the understanding of *Inummariit* or *Inummarittitut* (to eat, work, talk or even walk in the manner of a real Eskimo), are more widely understood by the senior or more experienced hunters and food preparers of Nunavik. It is a cumulative body of "localized" knowledge that is handed down from generation to generation and that is derived through direct contact with the environment and by acting like an Inummariit as the following comments illustrate:

The Inuit know what animals are sick or when they are not sick because they know it even without samples because they have been hunting it for years and years.

A real Eskimo can be more careful even though if he doesn't know how to do research, because he knows to take care of meat but sometimes we have to be careful. Just seeing the meat they can know that the animal is sick.

It is also a body of knowledge that reveals the interconnective relationships of living beings with one another and their environment. One informant spoke of the difference between the Inuit view of the human/environmental relationships and the "scientific" view:

We just keep finding again and again that everything is interlocked. Everything is inter-twined. Everything is not neat [like] with [scientific] classification. The world does not work like that to Inuit people. Do your labelling but we see this whole. So let us cherish this knowledge [Inuit knowledge].

Food to you guys [health professionals] is food, keeping nutrition, keeping healthy and you have pills to deal with the pain. Like the Doctor said there is a preventative measure and the other things that he listed. Why can't all that be one. Country food is preventing you from diseases. Therefore it is medicine. When you are sick and you are trying to gain back your strength, you eat country food. It's your medicine.

Animals and people and the land are the same. Ecology. People ... animals ... one. Maintaining their good health and making sure that they are healthy. Because what the nursing station has done is taken the initiative to deal with both but they don't understand the maintaining of good health in our world ... in our ways.

Younger Inuit also recognized the importance of knowledge about traditional food and were concerned that this knowledge be preserved and transmitted to younger generations. Some expressed concern that too many young people were harvesting animals without the requisite knowledge to protect themselves from potentially harmful problems:

I would really like to learn if it's bad or good. If it is bad, I would see it more fast. Our elder people have to teach us more about those types of things. Some younger people know what is bad food. When they see something they don't take it. They avoid it and give it to seagulls and dogs.

Knowledge of what is good to eat and what should be avoided is not absolute, but varies from community to community and indeed from person to person (hence the importance of the term "Knowledge**s**"). In some instances this appears to reflect personal preferences for taste and other qualities, while in others it would appear that if detailed knowledge of the risks or benefits from eating a particular species is not known, then the animal is avoided.

> *From the sea, I know that some of those people on the Hudson Coast eat mirqqulik [abalone]. Well, we don't eat mirqqulik here. For example, they eat narwhal in NWT but we don't here because there is more beluga here ... I know that they don't eat loons and akpak and pitseolak [little birds with a red beak - puffins]. These are the animals we don't eat. When I was a kid I asked my father why we can't eat loons and he told me that when we are not use to the food everyday we don't feel like eating it because we don't see those kind of animals everyday. That's what he told me. When a person is not use to something, they don't bother trying to eat it.*
>
> *I don't eat walrus meat. For me it is like an elephant so I don't eat it. One thing may be is that because I'm not used to eating it. I didn't grow up with it. In Great Whale, we didn't get too many walruses.*
>
> *When we see the animal, it is not a food ... especially the seagull. I really don't know if the animal is good but we can eat it when we are starving. The orca [whale] is the only other animal that I know of that people don't eat. The wolf is another that we don't eat. But I can say that if you don't have food or you are starving, you can eat it but you have to cook it. You can't eat it raw. But when we are not hungry, we don't feel like eating it. Well, I never heard of a person eating a raven before either.*
>
> *From the ocean, nipisaq ... the ugly fish that sticks to you ... and I've never seen somebody eating an owl, and I never eat dogs.*
>
> *Some people don't eat qairulik [big seal] but I would eat qairulik if I was really hungry because some people eat them.*

However, our informants also indicated that they were open to acquiring new knowledge from other Inuit in other communities. Knowledge was not considered to "belong" to any one person or community. It was to be shared and passed on. Its purpose was to benefit all Inuit:

> *Last summer, when we went to George River [Kangiqsualujjuaq], we saw a porcupine and so we were a bit hungry while going on the river and on the CB we were told it was very good food. When we first see an animal for the first time that we have never seen, we don't feel like eating it. But we heard on the CB that it was a good food. So we have different lands and different species, and sometimes we don't know what to eat and we don't know what the other villages eat; and sometimes for the first time we eat what they eat, and for the first time they eat what we eat. That is how we get to know that there is different food all around the land.*

Informants further suggested that while Inuit knowledge about potential harmful effects from eating "sick" animals might not always be perfect, this should not be interpreted as an indication of ignorance. Sometimes mistakes are made, but when this occurs, information is shared with other community members in an attempt to ensure the mistake does not happen again:

> *Inuit people are not stupid. They are not careless. They are careful about what they eat. But sometimes we make mistakes and people eat sick animals. Sometimes we don't know when the Iqunak [fermented meat] has gone bad, and we let people eat it but not by purpose, and they get sick but not by purpose. We try to take care of each other. When somebody eats a sick animal, it is not by purpose.*

One Inukitut term used to describe animals or meat as contaminated is s*ukkutarsisungutsutillu,* which means they have something that makes them bad. There are a variety of signs that Inuit look for when hunting or butchering animals to detect problems with the meat. These signs may relate to the behaviour of the animal, its outward appearance, or to various changes in the appearance of internal organs:

> *Since long time, someone has told me that some of the meat is contaminated. Since long time, they have known that. When the walrus is alone too much, they use to tell us that walrus is not good to eat. Not all of them though. Long time ago, it use to be the only food around. Now the contamination is bigger now since long time ago. Maybe it's caused by the motors.*
>
> *I would know where they would have sickness. I would know if they had manirniq [i.e., big lump in the animal]. These are the animals we don't eat. Those animals, that have sickness, we don't let the people eat them. We feed them to the dogs, and it is still like that today*
>
> *These are the animals we can't eat. When they have sickness, they have lumps, or they have been shot but got away, these are the ones we don't take. I'm not the only one who knows these things. There are others that know these things so I'm not alone.*
>
> *When we see the animals, we can notice that they are sick. It is very easy to see it. We can know that they are sick...When I cut it up, the bones are brown or when the seal is sick, I could see it through the liver, or if it is too skinny. I can see just by looking at it that it is not for food. When they are not sick, I can see it because they are fat, and they are not dangerous to eat.*
>
> *They always know the sickness of the seal meat by looking at the liver. If they see the liver, they would know if the animal would have sickness. For example, my father shot a seal and that seal was very skinny and it didn't look normal, and that seal when I would pull the skin and it would peel off. That is why I know that the hunters know what is sick because there are all kinds of signs.*

When they [ancestors] taught us something, we always had to remember. For example, the caribou - you can see that when it is sick. There is something wrong with the meat. It lost colour. When it was like that nobody would eat it even when they were really hungry because they didn't want to get sick so we just gave it to the dogs.

Me ... I see when I'm butchering an animal. I can see a sickness even those when I catch it looks okay but when I butcher it I can see what kind of sickness it has. When the intestines are not normal, they are sick even though the outside colour is okay. The inside is not always good. In their intestines, they can have bumps and the blue colour spots.

The examples described above are only a partial list of the various signs that hunters look for in order to determine whether an animal is fit to eat. Careful observation of an animal's appearance and behaviour is expected of hunters, and any evidence of abnormality will be discussed at length with other hunters back in the community.

Our informants suggested that even when an animal appears healthy, hunters are also sensitive to the presence of parasites which could render an animal inedible.

Even though it is a fat animal, there can be parasites in them. But that is how we know that we can eat the animal. When the animal has parasites, they are very dangerous, and they are not good to eat. The parasites are almost in all kinds of animals, but we usually see them in the caribou. Yes, when the animal is sick, there are parasites.

When I hear that there are some bugs in the meat, when we unthaw the meat, especially the caribou meat in the winter, I always look for parasites when I'm drying it or boiling it. When I think the meat is not good for me, I put it into the garbage. That is what I do.

Identifying parasites as an indicator of bad meat also points to the importance of visual information for assessing the health of animals. Some of our informants suggested that they regarded contaminants as very small parasites; the problem for them was to render these "parasites" visible.

So when the scientists come in here and take a piece of meat and take down south where they do some research on it and then a few weeks later they find that the caribou has parasites so the pregnant women can't eat frozen meat. But in our way of life, we didn't have any problems back then so today we think like them. We don't have any problems, but with my own eyes I saw a parasite on caribou meat. I recently believe that the scientists are right, but before I didn't believe them that caribou has parasites. I saw a qupirrualuk (parasite) when I opened a caribou up.

Inuit are resistant to invisible knowledge or knowledge that cannot be validated through sensory experience. Some of our informants suggested that Inuit would be more trusting of scientific information if they had the opportunity to observe contaminants themselves. Making microscopes available was one suggestion:

> *We as Inuit should have microscopes even if there's not a lot [of bugs]. I think it would be a very good idea if health authorities were to teach us to have microscopes to see if there is anything risky in the food. I feel this would help.*
>
> *I'll do what I do. I'll eat what I eat. Only if someone tells me and shows me that these are bad for your health now. I can only follow that. Only if they can show it to me.*

However, some hunters indicated that even if scientists were to make microscopic information available, they would continue to rely on their own traditional knowledge as a more inclusive indicator of the quality of food:

> *I always hear about scientists, but I've never watched them do the actual research. The Inuk knows when it is contaminated. Well, those contaminants I hear you can only see with binoculars [i.e., microscope]. Us, we don't know what they look like. Maybe we've already ate them, but we can't stop eating meats ... Even when I hear that someone is worrying a lot. The way I think is that they are my kind of food and I can try to see what is wrong with it, even when I don't see anything.*
>
> *We know! We have seen a lot of open seal, open guts. Usually they [hunters] don't catch the ones that are very skinny. If they know ... if they know it is not too healthy, they are sick. I have heard on the radio that for some people the caribou looks very healthy but when you open it up it looks very bad. They usually know when it is good or bad. We are always told that if you suspect anything at all, don't eat it. So if there is some suspicion about the meat, or whatever, you don't take it. You give it to the dogs or throw it away.*

These statements suggest that Inuit take great pride in their ability to make careful observations about all aspects of the appearance and behaviour of the animals they eat, in order to protect themselves from potentially harmful problems. Part of this pride is related to a sense of responsibility for others; a hunter would be irresponsible to share "poisoned" food with relatives or others in the community. Hunters insist that careful observation of all aspects of an animal's appearance and behaviour compensates for "invisible" microscopic information.

Contaminants as a Global Conspiracy

Although contaminants are seen by most Inuit as an external threat to the Inuit way of life, there is some confusion about the source of contaminants. For some, contaminants are a local problem, associated with garbage, sewage, and other environmental pollutants:

> *My wife went down to the shore when it was low. She saw two ugly fish that were already dead. It was by gasoline. Inuit's are not doing that. The pumper's [gas] pipe was cut and the gas came out where the gas came out. She saw the two ugly fish that were already dead. It didn't only happen here. It even happened in Kuujjuarapik.*
>
> *You can see them [caribou] when they are eating when they don't know that you are there. That's how I know. It is caused by the food that they eat because they are eating all kinds of things. Even down there. Here in the dump. There is lots of plants growing and there is a small stream. Even the stream is kind of green, and that is what the caribou likes to eat. That stream is coming from the sewage. That stream creates a lake and they grow and the caribou likes them. That's where they get mercury [metaphor for contamination]. It is us that should be blamed. There is a big difference - the caribou from inland and the caribou from here. The meat is different. This part here, around town, is always messy. It goes to the caribou, to the body, to the meat, if they eat that; That is, what is making mercury.*
>
> *... when I was in Kangirsuk, a caribou went to a dump or a sewage and I saw them eating garbage. In Apuluk, they were in the village. These are the reasons when they are getting sick because they are eating what they are not supposed to eat. Maybe that is why they get the parasites. If I kill a caribou in the dump, even if it is fat, they wouldn't want to eat it.*
>
> *What I've seen is that the pollution is making PCBs [metaphor for contaminants] and the ships come here and the motors from the boats are making PCBs; that is, how I know. That is my point of view. Well, when we go camping or fishing we always try to keep the land clean. We pick up garbage that is what I do now. Because we can feel that our animals are getting sick from the garbage so we always try to keep the camp clean.*

In some cases, scientific developments from outside Nunavik have also created suspicion. Some Inuit, for example, see country food as being purposely contaminated by scientists who are studying animals, and these perceived acts of contamination have persuaded them to stop taking those animals that are studied and to chose instead animals that have not been touched by scientific research.

> *Now a days, I don't eat polar bear. I get stomach aches. I used to eat it. I blame the tranquillisers which we see on T.V.; Those that make the polar bears sleep then they work on them ... Back then before I was born they ate the polar bear not boiled. Even ageing the meat. Nobody ever used to say someone got sick from eating. My elders never said that. Nobody said someone got sick or died from polar bear. Nowadays I worry about it, and I blame those that make the polar bear sleep.*
>
> *I like caribou meat, caribou head. They are delicacies. There is no chemicals in that they have not been shot by a needle.*

Other forms of data gathering methods have also been perceived as an additional source of contamination such as those methods used to assess cloud cover at each of the airports located in the villages:

> *Like we eat polar bear meat and there was one animal where they found something in the stomach of that animal. They were concerned. They were also concerned with those weather stations that send up those balloons [at the airport]. There is a radio transmitter when they send up the balloons, and they eventually fall down onto the land. They were concerned that they may affect the caribou.*

Several of our informants identified the contaminants discourse as an attempt by external authorities to prevent Inuit from hunting animals such as whales and seals. One hunter suggested that "Greenpeace" was responsible for all the research on contaminants. Others suggested that scientists in general did not want Inuit to hunt animals and were trying to frighten Inuit away from hunting by doing research on contaminants.

> *The Quallanuuts say that there is contaminants in the animals but I am very sceptical. There may be some but it may be a way to control us to prevent us from hunting as much. I'm suspicious though ...*

In general, the prevalence of contaminants is associated with the increased numbers of quallunaats:

> *Long time ago, it seems like there was no contaminants in our meats. Even when we were kids or teenagers. Now the quallunaats there are many of them. We hear a lot about contaminants. Seems like there wasn't any contaminants long time ago.*

Resistance to the Contaminant Discourse

Resistance to the contaminant discourse begins with a fundamental Inuit cultural principle that thinking, talking, or worrying about something too much will ultimately cause more problems. Older hunters contend that talking about animals too much may result in their disappearance:

> *The hunters' supporters ... when they talk about belugas, geese, and they say that when they're not many. When they talk about belugas too much, I feel sorry for them. Long time ago when I was young, they never use to talk about animals too much. They were telling us that they would disappear if you talk about them too much.*

Other Inuit believe that an over-emphasis on restricting the number of beluga killed can cause those animals to develop diseases or die or they may no longer follow their migratory route. In short, regulatory rhetoric can cause s*ukkutarsisungutsutillu,* which means they can have something that makes them bad as the following comment illustrates:

> *God makes those animals for us to eat so why are we being restricted of it? The older people always say that if you don't take from them they will not multiply, and the more you take from them the more they will multiply. That is what the older people say. If there are too many of them they can die from diseases. We don't take them for fun. We take them for food.*

Others commented that since "worrying" is the ultimate cause of illness for Inuit, ignoring the "contaminants discourse" was important in order to maintain one's health.

> *I use to worry a lot about that [contaminants]. When I started hearing about that I was very worried, but as my mom was saying if you are worrying too much you will just get it. You will get contaminants yourself. If I worry that I'm eating contaminants, she says you'll get it ... so don't worry. So what can I say. From hearing her parents always tell her not to worry about things that she can't handle, so she has been trying to get me to think that way. So I try not to really think about it.*
>
> *Since a long time, since our ancestors, they have known about the food. I don't need scientists to tell me what to do. The thing I'm not comfortable with is that when scientists tell us what is not good for you...When scientists check up the animals and they say it is not good that is the reason why I'm not comfortable with the scientist. I'm not comfortable with is that we have never had scientists before. Our father and grandfathers taught us. I'm not comfortable when the scientists tell us what is bad or good. We have our own feelings as to what is good or bad because our ancestors had taught us. The scientists are making the other people worry because our ancestors never taught us to be worried about the food. We hunt with our feelings because it is our lives.*

Resistance to the contaminants discourse has been expressed more generally as resistance to making impossible changes in diet. Although initial reports of contaminants generated some fear and concern over country food in some of the Inuit villages, much of that fear has subsided

and the consumption of *niqituinnaq* has resumed. Our informants expressed the view that making diet changes because of contaminants is virtually impossible because country food is fundamental to being alive, to surviving in the Arctic:

> *I don't know. Contaminants - they were all kind of in a panic - a crisis a few years ago when they started talking about PCBs in seals and in whales - in any sea mammal that has that. It would go into our body and it can't leave. So we were all kind of scared to eat seal meat and stuff for awhile but it's like it just faded away, and now we are just gulping down seal meat. We were even scared to eat miserak for awhile because they said it was in the fat of the animal.*
>
> *The nurses were talking about it, and they were warning the mothers who were breastfeeding and they were saying that it can go through the breast and give it to the babies. When I first heard about that, I was very worried and I thought that it was very dangerous. But with our way of life, we can't really change the things we eat because it is our food. If we try to live on whiteman's foods, like in the Arctic, we cannot survive. Us - the Inuit, when we live in the Arctic, the country food really helps us to keep us warm. When we try to live on store foods, we would keep running out of money, and we'll not be able to survive.*

Others suggested that craving for country food is heightened when something interferes with its availability. One Inuit woman suggested that putting restrictions on consumption only makes people want to eat more:

> *Everybody is an Eskimo, and when they get sick, they lose their appetite. Out from the land and out from the sea or from the low tide that person demands for the food that he or she wants. They pick the food they want, and the hunter goes and looks for it, and once they get food, they want to get their strength back because it is their own food. Their niqituinnaq. For example, if you run out of pop you will want it, and you will order if from the south because you want it. Everyday you would say I would like a pop. It is the same for country food. Just like that. Our elders, our ancestors were like that. They were really use to country food. Today, we are running out of food because of the pollution, and we are going to say that we really want it. We crave for it, and that we would really want it very much. When they are not eating country food very often, they get weak. Like they are craving*.

This statement also reaffirms the important connection between eating country food and health. This connection is only positive for Inuit. It is the essence of their cultural identity as well. People simply cannot imagine that the reverse - country food, properly caught and prepared - is dangerous for a person's health:

When they say that I just ignore them because these are the foods we eat. We have nothing to eat if we listen to them. I can't live without country food. Not even for one week. That is the only food that I eat. I can live without country food only when I'm in the hospital but not for long. We can know when the food is not good. When it is sick, we know not to eat it. Us - the Inuit we know when it is sick.

Resistance to the scientific or regulatory discourse often includes both restrictions related to contaminants as well as restrictions based on the conservation of animal populations. Inuit have little respect for "Western" wildlife conservation efforts, regardless of whether the source of these efforts has been "Greenpeace-like" organizations or scientific biological studies. Confidence in their own cultural approach to wildlife conservation takes precedence. For most Inuit this general distrust of scientific attempts to monitor wildlife also undermines any willingness to trust the science of contaminants:

When I hear them say that the animal has sickness, I get a little bit worried about it. I just think that we will just find out when the animal has sickness and that is when I start worrying. You know! But when they tell us to stop eating them, they are going to disappear just like this. But the Eskimos will not finish them. They will disappear because of their sickness. This is what I think. They say that there is not much animals anymore. God created them equally. He created them so we could have food. God helps us not to get sick because he created the animals to be our food. I don't worry about the scientists. But I don't like them when they say you have to take only this quantity of beluga that year. The reason they say that is because they think that there is not much beluga anymore. But there is a lot of beluga everywhere ... I really think about beluga whale. Today, we want more beluga whale but they're telling us to take a certain number. When they say that, in my mind, I think of taking more beluga whale. Even the whole village doesn't get muktuk or sometimes we have to share it and we only get a small amount and not enough for everybody. Sometimes we have to send it to another village because they are asking for it because they like it very much. That is what really worries me. Because with muktuk, we try to make everything. Igunaq! We dry it. We freeze it, and we make miserak out of it. Beluga whale is everything to us! I want the hunters to catch more beluga. Without a limit.

Conclusions

It is important to note that resistance to scientific discourse is not absolute; indeed Inuit are a practical people and are open to modification as circumstances warrant. Inuit wish to preserve both hunting and food preparation techniques and many indicated that if it is necessary to create a conciliatory environment with all people working together to ensure the health of animals, then they are willing to do so:

I think the scientists are okay because we would know what is in the caribou so we will be okay. They are checking so we would be okay. Those scientists are the reasons why we know which animals are sick now. We know that when the animals, when they are sick, because they are very skinny. We would not know a lot of things if we didn't have scientists. We only know that the animal is sick when it is skinny. That is the only thing we know about the animal so that is why I'm thankful for the scientists. I don't want to eat an animal that has lots of bugs.

I'm not worried about them because they have to do their job but some people get scared as to what they are saying but I'm not worried about them because they are doing their job. For example, if I want to make a food out of walrus [fermented meat], I would get the scientists to check it and that is how some people think today. I don't let the scientist check it, check my iqunak. I know how to make it, and I know how to see the things I do wrong.

I would really like it if doctors, nurses, scientists, and elders would talk together. I would really like to see that happen. They have to know what type of country food has sickness, and if they knew, I would go to them and let them check the food to see if it is good for me. But some of them I think they know what is good or bad. When they don't know, some people eat sick animals, and they go to the hospital and some of the doctors and nurses know how to cure them but some of them really know. That is why I would like to see the elders and the doctors talk about it. If someone suspects the food is not good, they don't have to go ahead and eat it. They could ask an elder or a doctor to see if it is good for them. That is what I think.

This willingness to work together with scientists, however, does not imply that Inuit must delimit their own knowledge or accept scientific knowledge entirely. Many Inuit believe that the positive trait of not worrying, their discipline of taking care, and the importance of the visual will get them through this period of concern:

I really don't worry too much about the food. Some people are worried very much but they will stop worrying because that is their country food and that they will just take it. Our culture is different from the south. We usually don't worry about whether the animals are going to get sick or not. We will keep doing it until we know for sure that it is not good anymore.

Just be careful with what you are killing and always check it up to make sure that it is healthy. If we didn't know that the animal had a sickness, and if we ate it, we would get sick. Always check the animal well and check if there are any signs of sickness because that is the only way we can have it today. I don't want them here [contaminants] because we didn't have them here long time ago. We didn't have them in the animals, and I don't want them here, but I can't change it.

> *I don't really worry about it because I eat a lot of country food, especially seal meat and their liver; and fish, I don't really worry about it when I eat it because I don't think they have PCBs. I have heard it said that animals have PCBs, but I never heard someone really getting sick from them. I'm not really sure they are right because they have never shown me that sickness. If they showed us, what kind of PCBs ... if they would write it ... or put it in a book .. or on the T.V., I would really believe them. But I don't really believe them when they say they have PCBs.*

Inuit confidence in their own cultural knowledge also honours the life of the *Inummariit* by advancing Inuit knowledge as superior or equivalent to scientific knowledge. Resistance to regulatory discourse and to the delimiting activities of scientists is embedded in what it means to be an *Inummariit* and in their knowledge of the land and of *niqituinnaq* as the following comments illustrate:

> *We know that when we cut up a seal. We know how to cut it up. We know what is bad and we know what is good, but now they say the country food is not good for use anymore. When we see something wrong in the food, they say that it is no longer good but they are wrong. It is good. Eskimos know when they are good or bad. They know what to eat but today our generation is worried but the real Eskimos know how to eat.*
>
> *Back then, they [real Eskimos] used to find out if the animal was not worth it for food. For the Inuit, they use to find out the sickness of the animal by their fat. But we just dropped our way of life and we started believing in white people. If there is someone who knows more than scientists, that is an Inuk. I am going to believe what he is saying but not the scientist ... They [doctors and nurse] know but an Inuk, everybody who is alive, can say this is good or bad. But I don't believe in that stuff [of doctors and nurses] when they are not really using it.*

In recent years, the contaminants discourse has modified its earlier more restrictive message of "poisoned food". The positive benefits of a country food diet, from both cultural (e.g., hunting lifestyles are healthy) and public health (e.g., polyunsaturated fats as protective against heart disease) perspectives, are now emphasized. However, risk communication discussions are based primarily on the problem of providing simplified scientific information to supposedly uninformed recipients. Risk communication strategies continue to ignore both the essential content of Inuit traditional knowledge about the risks and benefits of country food, as well as the political act of resistance that is generated when "contaminant bio-power" is grounded solely in Western scientific knowledge.

In summary, this paper is a challenge to the standard approach to risk communication. Inuit

traditional knowledge related to the recognition of the risks and benefits of eating country food is not right or wrong. Awareness of this knowledge also does not mean it can be easily assimilated into a risk information scenario. Communicating about contaminants in Nunavik communities must be seen as the engagement of two discursive formations, each grounded in alternative normative understandings on human-animal-environment relationships.

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