

Proceedings of the Standing Senate Committee on Legal and Constitutional Affairs

Issue 7 - Evidence for February 12, 2003

OTTAWA, Wednesday, February 12, 2003

The Standing Senate Committee on Legal and Constitutional Affairs, to which was referred Bill C-10B, to amend the Criminal Code (cruelty to animals), met this day at 4:02 p.m. to give consideration to the bill.

Senator George J. Furey (*Chairman*) in the Chair.

The Chairman: This afternoon we have two panels to assist us with our consideration of Bill C-10 insofar as it relates to proposed changes to the cruelty to animals provisions of the Criminal Code.

The first panel is from Inuit Tapiriit Kanatami. As you no doubt recall, this group had wanted to appear before Christmas and very graciously agreed to come today. We thank them very much for their consideration and forbearance.

The second panel was put together pursuant to a request by the committee to hear from experts who could elaborate on the issue of pain experienced by animals. We will be hearing from Dr. Alexander Livingston, from Saskatoon, and from Dr. Shelley Adamo, from Halifax, on this subject.

The first panel, from ITK, is comprised of Mr. Jose Kusugak, president, and Natan Obed, policy adviser.

We will be setting aside one and a half hours per panel. I remind the presenters that they have five minutes for their presentations, after which we will engage in a question and answer period.

Mr. Jose Amaujaq Kusugak, President, Inuit Tapiriit Kanatami: Thank you, honourable senators, for the opportunity to address you today on behalf of Inuit Tapiriit Kanatami. Natan Obed, our environmental policy adviser, joins me today and will be able to answer any questions you may have regarding the animal cruelty provisions proposed in Bill C-10B amending the Criminal Code.

Inuit Tapiriit Kanatami represents the four Inuit land claim regions that collectively care for approximately 30 per cent of this great land, or about 3 million square kilometres. More than 43 per cent of Canada's ocean coastline is found

within these regions. In addition, a significant part of the country's overall territorial sea and internal waters fall within Inuit land claim areas. The vastness of our territories and the diversity of animals found within them, coupled with the great value we place on our subsistence practices, make this bill very relevant to Canadian Inuit.

Inuit believe in treating animals humanely, and our interaction with animals reflects this belief. We approve of the idea of this bill, but we are not satisfied with certain proposed sections and some issues surrounding the legislative process. Even though meaningful consultation is required for federal legislative action involving Aboriginal people, no such consultation with Inuit has taken place within the legislative process on this bill.

ITK sent a November 28, 2001 letter to the Minister of Justice expressing our opinions on the bill and stating our wish to be meaningfully included in the legislative process. That was 15 months ago. We received a response from Justice Minister Cauchon last month. His letter states:

I would like to assure you that in fact efforts were made to include the views of Aboriginal stakeholders. A copy of the 1998 consultation document entitled *Crimes Against Animals* was sent to many Aboriginal organizations for their input and views.

We do not agree with Minister Cauchon that a single mass mailing constitutes meaningful consultation. The Department of Justice has argued before this committee that it has clarified the definition of "animal" in proposed section 182.1. We disagree.

Under the proposed definition, any living organism can be deemed an animal if it has the capacity to feel pain. Nowhere in the bill is there a definition of pain or how it can be measured in animals, or who could possibly be the competent authority to say whether any living organism can feel pain.

Since the proposed definition could encompass a vast array of species, it would be difficult to argue which animals do not fit within this new definition. This wide definition creates an opening for those who may wish to prosecute Inuit for violating proposed section 182.1 by causing pain to any organism that Inuit harvest. If the definition of "animal" is to be amended, its replacement should better serve the people it will affect. The proposed definition of "animal" is not an improvement on the existing definition, nor is it clearer.

We recommend that the existing definition of "animal" remain unaltered. The old definition has worked well for Inuit for many years. We see no reason to change it. The new offence of acting in a brutal or vicious manner towards an animal, and the failure to define those terms, will create further risks that Inuit harvesters will be targeted for litigation, even though they are acting within their constitutional rights. This new provision, without any consideration for Aboriginal rights, is unacceptable.

The result of such litigation related to proposed section 182.1 and 182.2(1)(b) would

mean overwhelming dietary and cultural costs for Inuit communities. Under the proposed amendment, Inuit harvesting practices such as harpooning a seal or a whale might be considered brutal, vicious or cruel and could result in imprisonment for up to five years. While this may seem unthinkable today, who can tell how the Canadian public will interpret Inuit hunting practices in 50 or 100 years?

Since the bill fails to provide the current upfront legal protection by not incorporating the phrase "legal justification, excuse or colour of right," from section 429(2) of the Criminal Code, ITK suggests that the pre-1997 Aboriginal non-derogation clause be inserted into this bill, reading:

For greater certainty, nothing in this Part shall be construed so as to abrogate or derogate from any existing Aboriginal or treaty rights of the Aboriginal peoples of Canada under section 35 of the Constitutional Act, 1982.

This wording is the only non-derogation clause that ITK will support. In conclusion, Inuit demand assurance that this proposed legislation would not in any way be interpreted to mean that established best-harvesting practices currently employed by Inuit are cruel or vicious or brutal. Assurance will not come from blanket statements from governmental departments that Inuit subsistence practices are not affected by this proposed legislation. Assurance will come from including Inuit in the legislative process, from reverting to the established definition of "animal," from acknowledging our right to use Inuit animal cruelty standards by including section 429(2) of the Criminal Code, and from including the pre-1997 Aboriginal non-derogation clause.

We are not satisfied with Bill C-10B. We are concerned that Inuit will be targets for litigation stemming from the provisions in the bill. We are aware and alarmed that we could be criminalized for our treatment of and interaction with the animals we have respected, valued and depended upon for our subsistence for as long as we have been part of the Arctic ecosystem. Inuit have been stewards of the Arctic and its vast resources from time immemorial and plan to continue this important role in the future. We would like to see the bill encourage, not impede, Inuit relationships with the animals and the lands on which they live.

The Chairman: Thank you very much, Mr. Kusugak.

Senator Baker: Senator Watt has been trying to educate a great many of us regarding the actual wording of his proposed amendment that meets, I believe, what you have been arguing for here before the committee.

Certainly Senator Adams has tried, over time, to explain to other witnesses who have appeared before the committee the special interests pertaining to the rights of people as affected by this new bill.

The Minister of Fisheries administers the Fisheries Act and whatever he says is the law. The people of Nunavut have taken the Minister of Fisheries to court from

time to time. I noticed that they won one case in 1997 regarding an allocation of turbot around Nunuvut, which was overruled by the Federal Court of Appeal and then turned down by the Supreme Court of Canada. There was another affecting what happens on land, as well as what happens on the ocean, and that court case was lost as well.

The Fisheries Act presently speaks about fishing for seals and other mammals under regulations called the "Marine Mammal Regulations." Those regulations discuss how one kills a seal, what one is supposed to do, and severely restrict how one kills an animal. However, there are exemptions there for what are called "beneficiaries." In other words, if you are subject to the James Bay Agreement or some other federal government agreement, you are exempt from many of the provisions. Section 49(2) of the Fisheries Act refers to "colour of right."

Under the Fisheries Act, if people can prove that they were doing something that they honestly believed was their right to do, then they are innocent.

As Senators Watt and Adams have pointed out, Bill C-10B provides you with no protection at all. You have no status as a beneficiary. There is nothing under this bill to protect you from what you refer to as "malicious prosecutions." Certainly there are no guidelines in that regard.

You recommend the inclusion of colour of right in Bill C-10B. Furthermore, you are asking that the non-derogation clause be inserted in the bill. Would that solve the problem for you?

Mr. Natan Obed, Policy Adviser, Inuit Tapiriit Kanatami: Honourable senators, that would go some way to alleviating our concerns with the bill. That would not be the only thing that we would be looking for. We would also be looking for explicit mention within the bill of an exemption for Inuit under land claims agreements, or something of that nature, which would explicitly clarify that Inuit have special rights and special concerns.

Senator Baker: Do you have any comment at all about the existing law on animals and mammals under the Fisheries Act? Do you have any feelings about the Fisheries Act and the regulations that apply to the same subject that we are talking about today?

Mr. Obed: I am not familiar with that piece of legislation and I cannot comment on it.

Senator Baker: That is a fair answer.

As Senator Watt has pointed out, in future, the law enforcement authorities, or somebody bringing an action against a hunter, will now have a choice. They will have the choice either to prosecute under the Fisheries Act, the marine mammals legislation, or the Criminal Code.

Senator St. Germain: My question relates to the non-derogation clause. Senator Baker pointed out that Senators Watt and Adams have been concerned about the

situations that relate to section 35. Here in Ottawa everybody jumps up and down saying they will protect native rights by virtue of section 35, and then we see proposed legislation like Bill C-68, which is the gun registration, which negatively impacts your people, and the Endangered Species Act that was rammed through, which is also detrimental to you. Yet we see these people pontificating about protecting their great Charter of Rights and Freedoms that was established here in 1982. The same people in the House of Commons and the Senate allow these pieces of proposed legislation to go through. I believe those are detrimental to the Inuit and the Aboriginal peoples as a whole.

In your presentation you suggest the wording, "For greater certainty, nothing in this Part shall be construed so as to abrogate or derogate from any existing Aboriginal or treaty rights of the Aboriginal peoples of Canada under section 35 of the Constitution Act, 1982."

Nunuvut has challenged the gun registration in the courts, I believe. Are you planning any action over and above that in regard to the protection of your rights?

Mr. Obed: Are you specifically asking about the non-derogation clause?

Senator St. Germain: I am asking what your general approach will be. I believe your rights have been violated under Bill C-68. My understanding is that that is the case under the Endangered Species Act, too. If those rights have not been violated yet, they could be.

There is other proposed legislation that could be even more detrimental. Is there a plan to deal with all this as a whole, or will you deal with these matters individually?

Mr. Kusugak: Even on the fisheries issue that was mentioned by Senator Baker, the land claims treaties were supposed to prevail. We have sections in land claims defined as "constitutionally protected rights" that are often broken. Inuit like to work through the process.

We do not really work in a segregated way, and if we can make the changes following some of the suggestions that Senator Watt had made, we would be happy. It says here, for example, under the killing or harming of animals, everyone who commits an offence "wilfully or recklessly..." "Wilfully," as Inuit would understand it, would mean with the joy and pleasure of the kill. It is not a matter of joy or "wilfully" in that way; it is a matter of feeding your family. I was in the office recently talking about this presentation and I was reminded that, when we were doing some house-to-house visits across the Arctic, it seemed every house had caribou, whale, seal, walrus or something that had to be killed in one way or another. It was not done wilfully, cunningly or happily, but as harvesting for a meal.

There is joy in hunting if you have been doing it for thousands of years, but when Inuit see on television the catch, snag and release of fish, they consider that to be cruelty because it is just playing with the fish.

However, if you have to harpoon whales and seals and so on, the whole idea is not to do it for the fun of it; it is to make sure it does not sink after you kill it. If you do not allow harpooning because it is considered cruel or something like that, we will be wasting an awful lot of seals, because seals only float in the winter. Other times of the year they sink, because the fat layer is thinner. Every one that you shoot will sink, if you do not harpoon it first. We will be wasting an awful lot of seals or whales in order to get one to feed the family. There has to be some understanding of what we call "the animal presenting itself." There is language like that, and everything that has to do with cruelty, which means to take pleasure in it and to play with animals. Any of those kinds of actions are defined as cruelty to animals. People say that if you are cruel to animals, they will get back at you, through sickness in your child or whatever. There are real issues, and that is why this is so important. However, definitions must acknowledge that we do not see it the way southern people sometimes look at it. It is really funny how, sometimes, we hunt our way, and the people who are catching fish, tearing the mouth and releasing them, say that it is perfectly right and apparently the best thing to do with fish.

Because the cost of store-bought food is so high, if people start getting scared to hunt because of this seeming cruelty, it will be so bad for them, because every household is stacked with country food at the moment. As a matter of fact, that is cruelty to humans.

I know that does not directly address your question.

Senator St. Germain: Very briefly, what concerns me is the basic erosion of Aboriginal rights that is taking place. It comes one after another. First of all, the most obvious, was Bill C-68, then the Endangered Species Act came through and now this cruelty-to-animals amendment, all of which fly in the face of land claims treaties that should prevail to protect your interests. However, if legislation like this continues, and you are subject to that legislation, you have a real problem.

My question was whether you have a strategy to deal with all these things. They are all basically the same thing, just presented in a bit of a different way. This cruelty-to-animals amendment is more severe because it is in the eyes of the individual. People can interpret this. Some could conceive of the removal of any life, for example, a fly, a seal or anything, as cruelty.

My concern is that it costs a lot of money to challenge these situations, and often, you people are not in a position to do that. You just do not have the readily available wealth to challenge these things. That is why Senators Adams, Watt, Gill and I are concerned about it. Do you have a strategy together with other Aboriginal peoples? I believe Nunavut filed claim with regard to Bill C-68, the gun registration.

Senator Watt: They have won temporarily.

Senator St. Germain: They obtained an injunction because it was construed as a violation of your rights under section 35. That is why I am asking if there is an

overall strategy, because the Department of Justice has said other things about non-derogation clauses.

Senator Bryden: We went to a great deal of effort to separate the firearms issue from the cruelty to animals issue. It is not over yet, but to this point we seem to be using our rhetoric more on Bill C-68, the firearms legislation, than on this. One of the reasons for separating them was so we could concentrate on this particular proposed legislation.

Senator St. Germain: Mr. Chairman, if I may, if you were an Aboriginal person like ourselves, you would not consider it "rhetoric." It is a removal of rights, so the point of view is in the eye of the beholder. I do not think it rhetorical.

The Chairman: Let me ask Mr. Kusugak if he has anything else to add in response to your last question about an overall plan with respect to this particular bill.

Mr. Kusugak: We have been dealing, at least when I was with Nunavut Tunngavik Inc., with the fisheries issue. We have also been involved, as the senator mentioned, on the gun control issue. I think we have also been doing what Senator Adams and Senator Watt are doing amongst other senators, teaching others about the Arctic, the peoples, the animals and so on. We are doing that.

It is the only way. The real difference that we can make is to teach the Canadian public, as well as others, to accept that there are different societies in Canada. We are a multicultural society. We are not a big melting pot, like the United States. We accept that there are differences among the Indian people, the Inuit, the Italians and the French. We should not accept just that we are different in colour, but that we have different geographical areas, languages, meals and so on. I am doing my part at least, as President of Inuit Tapiriit Kanatami, going to different universities and I have plans. For example, we are doing an Arctic tour with some senior officials from the federal government, taking them to Kuujuaq and other communities to show them what the houses are like, the community, and feed them some of the food that we are talking about here, for example.

At the same time, we are preparing for a cross-Canada tour to talk at universities and to others about this diverse country and how Inuit are not only different in colour, but also in their geography and the life they live.

I thank the senator for asking that question. The only way that I can answer it right now is to say we do not have an overall plan. The Nunavut court case, for example, is being watched by the Labrador Inuit Association, the Inuvialuit Council, as well as the Northern Quebec Makivik Corporation and is supported by them. We were all talking about, on the gun control issue, the Alberta case, where they might look at it as a property law, but then Nunavut Tunngavik Inc. decided to go forward under section 5 of their claims, and we started supporting that. We have overall plans that way.

The overall plan is to get the support of Canada, to make Canadians realize that

there is a definition of cruelty as far as Inuit are concerned. There are harvesting definitions as well, and we must define Inuit, not just as harvesters, but as part of the ecosystem that existed, I think, many years before the Europeans came, and we still have that role today.

Senator Beaudoin: One problem should be dealt with right from the beginning. It is section 35 of the Constitution Act of 1982, where you have collective rights enshrined in the Constitution of Canada. The Supreme Court has interpreted it very generously, and I agree with the court. It is much better than a clause in a bill. It is right in the heart of the Constitution that the Aboriginal people have collective rights. Some of those rights are fishing, hunting, gathering, et cetera. My first reaction is that the Aboriginal people are already protected in the Constitution itself. Strictly speaking, they do not need an exemption clause.

I know you will say yes, it is true that it is in the Constitution, but if they do not apply section 35, we have to go before the courts. I agree with you. However, I am not at all afraid that the rights of the Aboriginal nations are not duly protected right from the beginning. If we use an exemption clause, I think we should say only, subject to section 35 of the Constitution Act of 1982 and so forth applies to the Aboriginal nation.

It is much better than a strictly statutory clause of exemption because a Constitution is superior to a statute. Perhaps we should take that into account. I understand what they say. They are right and I agree entirely. The *Sparrow* case is clear-cut. You have rights that we do not. There is no doubt about that.

Therefore, if we are to use the non-derogation clause in Bill C-10B, it should be drafted differently from a clause that says that you are exempt. In my opinion, this Bill C-10B will apply subject to the Constitution of Canada, and in particular, section 35 of the Constitution Act of 1982.

That is very important, and it is much better protection for the Aboriginal nations than an exemption in the statute itself.

The only thing that worries me, in practice, is saving the Aboriginal nations from having to go to court to have their rights complied with. However, they are already protected in section 35.

We should perhaps say, as an amendment to Bill C-10B, subject to the protection that already exists in the Constitution — referring to section 35 — this act applies, and so forth.

In my view, it is much more a question of drafting than of substance.

Senator Adams: In the brief there, I think it said it takes 15 months to get a letter answered by the minister. Will he explain a little, or will he accept a clause for the Inuit or just say that is the way it is? I do not want to see it happen again as at the beginning of Bill C-68. Senator Watt and I worked on it with the chairman

here about six years ago.

Senator Beaudoin: Yes, I remember that debate.

Senator Adams: We had over 60 witnesses in two weeks. At that time, Mr. Rock kind of accepted things before the bill passed. He was going to recognize us in a different way before gun control was brought in. Then when the bill was passed, he came back to the committee, and he said, "We are all the same. We are all Canadians. Nobody is different." That is what he told us.

I was wondering if the minister who wrote the letter to you would say the same thing to you about Bill C-10B.

According to our rules in the Senate, we are not allowed to make any amendments on House of Commons bills. In the meantime, we can hope for an amendment to pass here in the Senate and in the committee. We will have a little difficulty. Senator Watt and I are outnumbered. We can sit here and ask questions of you. That is our role in the Senate. If a vote comes up on the amendment in the house, we can vote. It is a little difficult to get it past the committee. That is the way the committee system works. In the meantime, what did the minister say to you about Bill C-10B in the letter?

Mr. Kusugak: Minister Cauchon?

Mr. Obed: Minister Cauchon's reason for removing section 429(2) was, as the deputy minister also said when speaking to this committee in December, that it clarified the bill and removed something that was misleading to people, that they did not have the colour of right. That was one of the questions that we raised and he answered.

He did not feel that we were going to be adversely affected at all by this proposed legislation because of our unstated rights and also because of the current practices, not only of Aboriginal people, but also of industry in Canada. They will not be affected by this new bill and nor will Aboriginal interests.

Senator Adams: We heard a little about colour of right from some criminal lawyers a few months ago, but I understood that it related to if someone shot your dog on your property, for example, and did not relate to cruelty to animals.

Senator Beaudoin: To add to what I have said, I agree with the last three lines in your amendment. I agree that it is certainly not bad to say "for greater certainty" in the statute. The purpose of my intervention was to say that you are already protected in section 35, but it may be very good to say in the statute itself that it is for greater certainty that we refer to that.

In other words, strictly speaking, we do not need it, but in practice, it may save you a lot of trouble. You will not be obliged to go to court.

Senator Watt: I will deal with the consultation issue. In his opening remarks, Mr. Kusugak made it clear that there was no proper consultation between his organization and the minister. Senator St. Germain asked what the overall plan of the Aboriginal people is, since their rights are constantly being attacked through legislative avenues, although not through changes to the Constitution, because that cannot be done without a first ministers conference.

Whenever Senator Beaudoin, our constitutional expert, mentions section 35, I get a little worried.

Senator Beaudoin: What I say about section 35 is in your favour.

Senator Watt: I am referring to the first part of your comments, which I do not think is absolutely correct.

Senator Beaudoin: I would like to know why.

Senator Watt: The constitutional recognition remains intact, but legislatures can, at times, give it a different interpretation through legislation. That does not mean that we cannot reopen and argue the issue, but that is one reason why I worry when you say that we have our constitutional rights and therefore should not worry.

Senator Beaudoin: You cannot have more protection than the Constitution offers.

Senator Watt: I am not asking for more than that. I just want to ensure that the application of our rights in the Constitution remains the same and is not changed through legislative avenues.

The witnesses were saying there that there has not been proper consultation on this issue. Senator St. Germain asked what is the overall plan of the Aboriginal people since our rights are constantly being attacked through legislative avenues, albeit without changing the Constitution. We have been impacted by legislative initiatives such as gun control and various others since 1982.

Any action to be potentially taken by the Inuit of Canada as a whole, be they from Labrador, Nunavut or Nunavik, about which Mr. Kusugak is very knowledgeable, would have to be discussed among the board of directors of ITK.

As a senator, I do not consider this proposed legislation to be bullet proof. I think it could be overturned by the courts very easily, especially in light of section 35 of the Constitution that protects Aboriginal rights.

As I have expressed here many times, our traditional hunting and fishing activities will have to be eventually acknowledged. The way to acknowledge them is to amend this bill. I am not now sure whether there will be a meaningful amendment to accommodate Aboriginal concerns.

To my knowledge, this bill is not in the hands of our leaders and has not been discussed seriously.

Would you agree with that, Mr. Kusugak?

Mr. Kusugak: I agree. I know of only one who has studied it. I have tried to talk about it with other people, but they are not aware of it. Mailing out a questionnaire does not really work. There must be a more personal consultation process.

As to whether there is an overall plan, this is the 10th anniversary of Nunavut signing the land claims and they are going to be looking at the overall implementation and some areas that have not been honoured by the other side of the table.

There are a few examples; gun control is one. This may be in conflict with section 5 of the land claims agreement.

A meeting is supposed to be held in March, chaired by one of the land claimant groups, to have all the other land claimant groups to go there to discuss how their implementation processes are going. Northern Quebec has had their implementation process for over 20 years. The Inuvialuit, Western Arctic region has had their process for somewhat less time. Labrador is just finishing theirs. There are many areas that have not been implemented.

On the issue of whether all Canadians are equal or the same, I wish that were the case. If that were a reality, there would not be the necessity for women's associations, the Liberal Party, the Canadian Alliance or the PCs. We are all different and we must accept that.

In regard to the non-derogation clause, very often, when we mention certain parts of the claims, for example, nobody knows what they are except us, because we work with these documents all the time. That is the same as someone who reads the non-derogation clause but does not know what it is.

I do agree with Senator Watt that there ought to be some qualifier for different terms when you use the non-derogation clause, and depending on what areas you use it in, sometimes we must qualify them by including certain words. We do that quite often when we are dealing with some members of Parliament, for example, not just talking about section so and so in our land claims, but we actually write it out. It takes less time to read a small section than it would take for them to actually leaf through the book to look for the section that we are talking about.

I believe it is necessary to qualify our terms; this is what we mean by the non-derogation clause, for example.

Senator Bryden: We tend to use the words "cruelty to animals" in different ways. However, it struck me that, other than the in-brackets reference in the title of this

bill, the word "cruelty" does not appear at all. What does appear at various places in the bill is the prohibition of certain activities that would constitute an offence. For example, clause 182.2(1) in the bill says that everyone commits an offence who, wilfully or recklessly, takes certain action.

Is it correct that a good part of your evidence has been that Inuit and Aboriginals do not treat animals wilfully or recklessly?

Clause 182.2 outlines offences in the bill. It says that everyone commits an offence who, negligently, causes unnecessary pain, suffering or injury to an animal. If I understood you correctly, traditionally, no Inuit would do that. Would you just comment on that?

Part of the problem is coming to grips with the concern that the RCMP, Fisheries officers and everyone else will be running around the country charging people under this new bill. Before they do that, whatever act was committed must fit into this proposed legislation. The act must be reckless, wilful or negligent.

You have indicated to us that they could not do that because the intent to do any of those three things would never be there in the mind of a native person.

Mr. Kusugak: I cannot generalize to say that every Innu is like that. There are Inuit society laws that deal with anybody who brutally, wilfully or for pleasure, mistreats animals.

I am not saying that all Inuit are perfect and animal-loving. There are Inuit criminals in that sense as far as Inuit society laws are concerned. There are traditional ways of dealing with them. In the most severe cases, I imagine, it would take two hunters to hold the guy down and a third to stab him to death.

Senator Bryden: That might be somewhat illegal, too.

Mr. Kusugak: Before we had the RCMP and the goodwill of the federal government to enforce justice in the North, there were ways that Inuit dealt with issues such as that. Cruelty and brutality to animals are such old offences under the Inuit traditional laws that we actually believe that if you are cruel to animals, that action will come back on you in the form of illness or sickness in your children or the people you love.

Honourable senators may sit here and say, "Well, that is spiritual nonsense." However, we are taught that right from childbirth.

We do not kill animals wilfully or happily, for the sake of killing the animal. We kill animals for their use.

I have mitts that are made out of sealskin. I know that I can go to the store and buy mitts, but any mitts that I buy in Ottawa will never compare to the ones that I have here because they are made differently.

Senator Bryden: I was trying to do two things. First, to establish what you are saying in general about the Aboriginal community, that they do not violate these rules.

However, as you have indicated, there may be a bad actor in your community, the same as in anyone else's, who may do these things wilfully. That is fine and I appreciate that. One of the things we need to remember is that the elements of the offence have to be made out before anyone gets charged with anything. You do not need a defence unless you have a charge.

I wanted to ask several quick questions. In the conclusion of your brief, and I want to be clear about this, you say you have established best practices currently employed by the Inuit and this bill would never be interpreted so that those established best practices were deemed cruel, brutal or vicious.

Later on you say, "and acknowledge that our right to use established Inuit animal cruelty standards," but actually, established practices that you referred to above would continue.

My question is very specific: Are these rules and standards written down somewhere? Obviously the community establishes them. Are some of them in fact written down?

Mr. Kusugak: We have cultural centres in some communities. I imagine they are written down.

This would be unlike the southern style of keeping a library, because traditionally it would have been pretty impossible for nomadic peoples to carry that much paper around with dog teams when going from place to place.

In the Western scientific world, you have the hypothesis, the method, the experiment and the conclusions. In Inuit traditional knowledge, they have done away with the hypothesis, method and experimental part, but they kept the conclusion. That conclusion is called the "traditional knowledge." That traditional knowledge then becomes something that anthropologists like to refer to in a spiritual and romantic way. In fact, the traditional knowledge puts it into a spiritual context in which, if you disobey it, you will die within a year or something.

In all seriousness, it is just a way to ensure that kids learn to obey. If you tell the kids, for example, that they should not push an Inukshuk down because it is bad thing to do, that is a great invitation to push it down. However, if you tell them that if they push one down they will die within a year, they obey the law.

It is not necessarily written down as such. It is taught from generation to generation that cruelty to animals is punishable by whatever the penalty is, which I imagine might be different, in some cases, from region to region. So far, traditional knowledge, with very small variations, is very similar, whether in

Senator Watt's region or Senator Adams's region. I can generalize and say that from Alaska to Greenland to Iqaluit, societal laws are very similar and imprinted. They are taught generation to generation. I can assure you, now that we have computers, that they will be written down. The Western world is slowly accepting traditional knowledge, and it can help Western science.

To answer your question, in a matter of a few years, I am sure we will be able to answer, "Yes, it is written."

Senator Bryden: You would be able to establish the norm for a community, as to how this is done.

Mr. Kusugak: Definitely, yes.

Senator Bryden: I want to follow up on some things you said. You talked about diversity in Canada. That is fair enough. I wanted to mention, if you were not aware, that last week, a rabbi from the Jewish community appeared before us to make a proposal that the ceremonial slaughtering of animals for both the Jewish and Muslim faiths be exempted from this bill. I believe his fallback position was that 429(2) should be included as a defence. As you have been saying, you follow a spiritual tradition.

Apart from the fact that you should have been consulted and not simply written to, which we can all accept and it will take us time to try to improve that situation, if both the Constitution's "for greater certainty" clause, with section 35, and 429 were included in this bill, that would go quite a long way toward answering your specific difficulties with it. Is that correct?

Mr. Kusugak: I agree. I do not want to be taken as saying, in reference to the rabbi, that we have a ritualistic use of animals for sacrifice or whatever.

Senator Cools: Point of order. I think Senator Bryden intended to say "the ritualistic slaughter." There are no animals being used in sacrifice or anything like that. The witnesses who presented before us had been talking about the proper ritualistic way of slaughtering for food, the kosher food, in the instance of the Jewish community, and the halal foods for the Islamic people. There is no ceremonial slaughter or sacrifice involved.

Mr. Kusugak: I apologize for that.

Senator Bryden: That was my mistake.

Mr. Kusugak: Sorry about that. Since the senator just explained that, it made me think about certain things. As a matter of fact, I think it would be the opposite of preparing an animal. [*Mr. Kusugak spoke in his native language*]

What I just said was they do not even like to chase animals, because they say a chased animal's blood is not as good as that of a standing kill.

The honourable senator said that I sounded as if we made spiritual issues of animals and so on. That is totally untrue. Even though Inuit use a spiritual explanation to set rules, it is just to make the point that that was the scientific conclusion, so that we do not have to refer to the reasons we came to that point. I assure you it is not spiritual. It is science. Inuit are the most scientific people I know, at least on our side of the world.

Often, we take a ritualistic, spiritual slant so that we do not have to keep explaining. Because there is this traditional knowledge, most people now do not know how they got to that point. Right now, because of computers and the modern way, we are starting to decipher it.

All the traditional knowledge that you will hear after the rules are deciphered will be like Western science, because it will begin with a hypothesis.

Senator Jaffer: I would like to thank you for coming here. You have come a long way, and I also want to let you know that Senator Watt and Senator Adams have certainly educated us on your positions. I also want to thank you for the efforts you have made toward making Canadians understand diversity.

Consultation is a very important issue, and in my short stay here, I understand that sometimes we can make notes to the minister about the process, and perhaps at the end when we recommend, or whatever it is we do, we should write to the minister about the weakness in the consultation process. You have made a very good point about the almost non-consultation. We are certainly taking note of it.

I am following up on what Senator Bryden was saying to you about pain. My question is more specific in the sense that I very much understood what you said about the respect you have for animals, and how there is a special way of treating them. However, we all have to agree that some pain always occurs when animals are killed for lawful purposes.

The way I understand the law as it is now, it only refers to "unnecessary" pain. There is also case law that talks only about unnecessary pain.

Do you agree that inflicting pain is a necessary part of your hunting, and that it is legal under the bill? Nothing changes with respect to the necessary pain inflicted on an animal.

Mr. Kusugak: Yes. That is why we said at the beginning that this is a bill that the Inuit respect as far as the cruelty- brutality statements are concerned. If you are part of the ecosystem, which we claim to be and were for so long, you want to be as humane to animals as possible. It is entrenched in our tradition. As I said, Inuit are not all perfect. There are some bad guys out there, just like in any other group; however, there are also societal laws to deal with them, to the extreme that sometimes in the Western world you can throw someone in jail, and so on. However, nothing hurts more than when we know, and let people know, that if you

are cruel to animals, it will reflect on your children. Their health will be affected, and so on. You do not want that. That sometimes is worse than having to go to jail.

I totally agree with you, as long as Inuit traditional hunting and so on is not affected and people are not scared of going out to feed their families because of a law that says they can go to jail for doing it.

We know it might not be right now; it might be 20 years from now. Apparently that gentleman in Nova Scotia was never arrested for picking up gas across the street in the United States for years. Then one day he went across the street, filled up his car, and an American cop picked him up and arrested him. That is what we are scared of. The intent might be understood now, but without actually defining it, as Senator Watt was suggesting, we do not know what people will look at in 20 or 50 years.

Senator Jaffer: I understand your concern is about unnecessary prosecutions, especially private prosecutions. Is that correct? That is what I understood from what you were saying earlier.

Mr. Obed: Yes, that was the point of our statement. I do want to comment on several questions that have been asked, especially by Senator Bryden, about possibly including a reference to section 35 within this particular proposed legislation.

We view exemptions or the non-derogation clause or specific references to comprehensive land claims agreements within federal legislation as the link or path to the truth as it pertains to how Inuit fit into such legislation. A reference to section 35 within this bill would help make that link. Our rights are there. We understand that, but in a practical application of this piece of proposed legislation, we need to see that link. We need to have the assurance that we have been looked after, that the Canadian government has our interests in mind when it makes legislation, and that they are serious enough that the government put that in writing.

They have said to us many times now that this will not negatively affect us. If that is the case, we would like to see that assurance explicitly within the proposed legislation.

Senator Joyal: The last comment of the witness is very important because we are dealing with questions of law and good faith. Mr. Kusugak stated in his brief that they have not been consulted.

I would like to draw the attention of our colleague, Senator Jaffer, to this point. This is a constitutional issue. This is not just good government policy, sending a proposed bill or white paper to non-aboriginal Canadians at large and asking them to come back with some comments and suggestions.

In relation to hunting, fishing and harvesting animals, Aboriginal people have constitutional rights that are guaranteed by section 35. Not only are they guaranteed by section 35, they are reaffirmed by section 25, which refers to the Royal Proclamation of 1763. The Supreme Court of Canada has interpreted very well the meaning of those two clauses of the Constitution in three recent cases after the adoption of the Charter: the *Guerin* case in 1984; the *Sparrow* case in 1993; and the *Wewaykum* case in 2002.

With respect to the obligation of the Crown in relation to Aboriginal peoples, the Supreme Court said that when we the Crown — the federal government, the federal Parliament — legislate in fields where Aboriginal peoples are directly affected, we have three obligations. The first obligation is to consult them. It is a constitutional obligation stemming from sections 25 and 35. The second obligation is that we must come to a solution that causes the least possible disturbance to their way of life. It is like the old test in the case of section 1 of the Constitution: What is reasonable? The third is that they must be compensated if we infringe upon their traditional rights.

We have here some Aboriginal people: President Kusugak, Senator Adams, Senator Watt and Senator Gill. We are doing a study and we are told that in the process of preparing this bill, we — collectively — have not followed the obligations that the courts said we must follow when dealing with legislation pertaining to their rights.

Therefore, it is not just a matter of saying, "You are protected. If you do not like it, go to court." Nunavut Tunngavik Incorporated is presently in court against the Attorney General of Canada on the firearms legislation. We cannot just say, as we do to other Canadians, "We will legislate and if you do not like it, go to court and contest it." We must involve the Aboriginal people in the process because we have a fiduciary responsibility. We are in trusteeship of their rights. That is the most important element of section 35.

These witnesses today are telling us that, as senators, we are their trustees, we were supposed to consult and compensate them and create less disturbance. Unfortunately, they have concluded that we have not done that, so how can they trust that in the future no one will decide that the way they hunt is cruel. Cruelty has subjective elements to it. Something that is cruel to you may not be cruel to me. The element of subjectivity would be left to the appreciation of evolving standards of society in relation to animals.

What will we do with what we are being told today by these witnesses? I am sure that they are not in a different position from other Aboriginal peoples. I would bet that other Aboriginals only received the documentation in the mail.

I do not quarrel with the present Minister of Justice, as he has been minister for only the last year or so. However, the net result is that we are faced with taking a decision. How do we respond to the request we have received today? How do we balance our responsibility to the people of Canada generally to legislate fairly and soundly on animal cruelty without impinging on constitutionally protected rights to

harvest, hunt and fish under traditional practices?

That is what we are faced with now with this bill and with our fiduciary responsibility to the Aboriginal people of Canada.

You have proposed the inclusion of a non-derogation clause. We have a problem with that, as we had with the endangered species bill. I think Senator Nolin and Senator Beaudoin were in the Senate when we had a discussion on third reading of that bill last fall. The Minister of Justice is in the process of reviewing whether we should delete all those clauses, put them back to the way they were in 1997, or use a differently phrased non-derogation clause. What do we do?

We do not want to hurt the Inuit or any other Aboriginal peoples of Canada. We know there is a problem with the non-derogation clause. All my colleagues around the table, especially Senators Watt, Gill and Adams, have made interventions on that issue.

We are faced with the problem that we have already decided to let these clauses stand in relation to other bills. On the other hand, we do not want to adopt legislation that would endanger the traditional and constitutional rights of Aboriginals to fish, hunt and harvest in the way they have been doing for at least 400 years, before the first European settlement in this land.

I am damned if I do and damned if I don't, but I do not want to adopt legislation that will hurt the Aboriginal peoples of Canada, that will infringe on their constitutional rights, when it is clear that they are protected when hunting and fishing on their territory.

Senator Smith: Senator Joyal's commentary was very helpful. He is obviously more familiar with these three Supreme Court of Canada cases than am I.

You talk about our obligation to consult with the Aboriginal groups. Is it clear whether that consultation must take place during the drafting stage, or can it take place at the legislative committee stage, after the bill has received first and second reading?

Senator Joyal: It says "consultation prior to legislation." If you want to legislate with the least disturbance possible, you have to ponder various options and decide which is the least disturbing.

Senator Smith: I am not arguing with you.

Senator Joyal: The definition itself says that it is before.

Senator Smith: So you think it means in the pre-drafting stage. This could be fundamentally flawed, but may be rescued?

Senator Joyal: Yes. That is why these people are here. They are of good faith.

Senator Smith: I appreciate that.

Senator Joyal: They have come to ask us to adjust this proposal in order that non-Aboriginal people will get what they want, that is, a bill that protects animals from cruelty, while allowing them to continue to hunt and fish in their traditional way in their territory without being in danger of court action or of being bothered or harassed in the future for doing what they have done for a very long time.

Yes, it is salvageable.

Senator Baker: I want to reassure the witnesses. As you can see, the senators are very involved in this discussion. Nunavut Tunngavik Incorporated took the federal government to court and your affidavit was used in the court case. You argued in the Federal Court that the federal government had arrived at an agreement creating the Nunavut Wildlife Management Board, and that it was necessary under the Constitution to have consultation with the board about the legislation, which is what you signed.

You took the federal government to court because in 1997 they reduced your turbot quota and gave some of it to foreign nations and the rest to Newfoundlanders and other people.

You took the federal government to court and you won. Then the federal government said, "Hold on a minute, now. No, you cannot win, we are going to appeal it." The government took the matter to the Federal Court of Appeal. The Federal Court of Appeal said that under the law, the minister has discretion; all the minister must do is to consider what was said in the Nunavut Wildlife Management Board Agreement.

Then along came another case, and you decided to take that to the Federal Court, and lost. You appealed that matter to the Federal Court of Appeal and lost. Then you appealed the matter to the Supreme Court of Canada. Along the way, the court made you pay the costs. The Supreme Court refused to hear your appeal.

You were the president who tackled the federal government on all these issues that we are talking about here today. The final decision was in the Supreme Court of Canada. The Federal Court of Appeal was absolutely correct in 2000, in that the minister's decision had a rational basis and gave due consideration to the principles of adjacency and economic dependency, and as interpreted by the previous decision of the Federal Court of Appeal.

How do you feel, after that procedure? How did you feel at the end, when you lost something that you thought for sure you would win, because, as Senators Watt and Adams have said, under the original land claims agreement, you thought you had the protection, but it ended up that you did not have it at all? How did you feel after that process? Is that one of the reasons why you are here today saying that greater guarantees must be put in the proposed legislation?

Mr. Kusugak: When we go page by page through the implementation issues — and the claims were signed by both parties and agreed to — and when we come to areas of adjacency, for example, it seems so clear. The first page of the agreement mentions self-reliance, discusses ways to develop that and so on.

One way to develop self-reliance is to obtain a larger quota in the fishing areas that are adjacent to Nunuvut land claim areas in order to be able to buy the appropriate ships and so on. We own both FirstAir and Canadian North. We own the northern transportation companies and those kinds of things, but this agreement speaks to the development of the fisheries area. We were being forced to cut that area completely because we did not have a sufficient quota to afford any kind of fishing vessels. That was why we decided to go to court. That is the last thing anyone would want to go through, because of the finality of the court decisions. You never know which way the decision will go. The decision hurt at the time and it continues to hurt.

When gun control legislation, for example, jeopardized the rights given to us under the land claims agreements, we again had to decide whether it was worth the effort, the pain and the cost to go to court. We are not like the federal government; our money is not taken from taxpayers year after year. We had to make a judgment call in our organization on whether to go ahead with that. You never really know what the result will be. That is why I am hopeful that this bill might include certain things that will make the proposed legislation more defined.

When I saw the word "wilfully," I did not know whether to interpret that as "Yes, I do want to kill that animal," or if I have to kill the animal for my family's welfare, if that is "wilfull" as well. I do not know.

A loose translation does not mean anything to Aboriginal people. These issues must be sufficiently defined so that they do not take away the hunting rights of Inuit.

Senator St. Germain: Senator Joyal hit on something sensitive in the consultation process. We have heard this before. I am not oblivious to the realities of Parliament. Parliament is a tough place in which to work because you have partisanship, the protection of governments and what have you.

I hate to return to Bill C-68, but we were here on that bill. I worked with Senators Watt, Adams and others on that proposed legislation. We travelled to the North; we talked to the Inuit, and there was no consultation per se. I do not know how we can rectify this. This is not grandstanding or bullying, but it is a question of dealing with the realities.

Senator Beaudoin says the rights are enshrined, but those rights are only good if they are respected and effective. If these groups must go to court, the witnesses have shown clearly that courts are costly and ineffective for people who subsist off the land up there.

Bill C-10A was part of the gun scenario. That was one of the problems, and no different from this in some ways. Bill C-10A could negatively affect gun ownership. That is proven by the fact that legal action was taken to rectify the situation.

Far be it from me to come to this committee and tell members what to do, however, those of you who sit on this committee must really take into consideration, once and for all, what is really protected under sections 35 and 25 of the Constitution. Whether we like it or not, it is our Charter; it belongs to us. The Charter will be there for generation after generation. We have to make it work. If we do not make it work now for our Aboriginal peoples, we are shirking our responsibility. Somehow, we must make this work. This is a prime opportunity. I do not see this as capitulating.

If you said right now, "Get out of here and we will fix this, because we would sooner fix it without you," then I am gone. I want these people to benefit the way they should. That is the way we must look at this matter.

We have an excellent chance to fix it. We have people with the expertise, with Senators Beaudoin, Joyal, Nolin and Bryden all being lawyers. Let us do something and make it work.

Senator Cools: You should include somebody besides lawyers, because some lawyers do a good job of messing things up.

Senator Beaudoin: It is true, unfortunately, that the consultation did not take place. It is too bad. We have that legal, and even constitutional duty, because it is in section 35 as interpreted by the court. However, we may correct the situation here, around the table. That is the only thing we can do. We cannot rewrite what happened five years ago, but we have to do something. The Aboriginals are here. We have Aboriginal people on our own Senate committee. We should correct this, and comply this time with every constitutional obligation. This is one way.

I agree with Senator Joyal that it is a constitutional problem. There is no doubt about that. However, the fact that it is constitutional does not mean that it cannot be solved. It may be solved and should be.

The Chairman: Mr. Kusugak, Mr. Obed, thank you very much for coming, for your patience and for putting up with us over the Christmas period. Thanks for sharing your thoughts and concerns.

Mr. Kusugak: I wanted to say that I am sorry we did not bring a copy of the presentation in French. We never did get any money to translate it. I was born in an igloo in a Roman Catholic community 53 years ago, but the church never taught us French. They taught us Latin.

The Chairman: We will have it translated and distributed.

Mr. Kusugak: Thank you for the opportunity to speak with you and for the

attention and the suggested help that we got around the table.

The Chairman: We are fortunate to have as our next panellists, two specialists on pain in vertebrates and invertebrates. The first is Dr. Alexander Livingston of the Western College of Veterinary Medicine, Department of Veterinary Biomedical Sciences, who has travelled from Saskatoon to be with us. His brief, entitled "Pain Assessment in Animals," was circulated on Tuesday. His expertise is primarily with vertebrates.

Our second expert is Shelley Adamo, who holds a doctorate in biology and is a researcher specializing in invertebrates at Dalhousie University. Her brief, "Do Invertebrates Feel Pain?" was also circulated on Tuesday.

I thank you both for forwarding your briefs and travelling to Ottawa on short notice in order to share your expertise with us.

Before we proceed, I would also like to thank Dr. Clement Gauthier, of the Canadian Council on Animal Care, who was responsible for assisting the committee in getting these experts here this evening.

Dr. Alexander Livingston, Dean, Western College of Veterinary Medicine, Department of Veterinary Biomedical Sciences: Thank you very much, Mr. Chairman and members of the committee, for inviting us here. We appreciate the opportunity to share with you any information that may be of help to you.

My background is as a veterinarian. I did my veterinary degree in London and then a physiology degree. I went to Bristol in the United Kingdom and did a PhD in pharmacology. While there, I worked on the pharmacology of the central nervous system, and about 25 years ago I became interested in the area of pain. I have worked in that area ever since, apart from balancing budgets and dealing with collective bargaining units for the last 10 years. I can assure you that budgets and collective bargaining units keep me focused on the issue of pain, although it is not necessarily animal pain.

The matter of pain in animals is an area of great interest and great challenge. The basic challenge is that the source of most of our information in the first instance comes from human studies. It is only through human expression and communication with regard to pain that we can begin to evaluate the situation as it exists in animals, but even so, that is not without its problems.

Without getting too philosophical, do I feel my pain as you feel your pain? I cannot be absolutely sure about that. Consequently, since we are dealing with a perception, it presents a large number of challenges that are not present in many other aspects of physiological studies that we can do in animals. We can, however, look at some of the effects that we see associated with pain and try to infer from them whether the animal is experiencing the same conceptual issues that we associate with the experience of pain.

The sort of thing that makes it is really difficult to even begin is that many hormonal or biochemical changes in the body can be a result of stress or distress without pain. For instance, for flock animals like sheep, one of the biggest stresses is isolation rather than pain. There is no pain associated with a sheep being on its own in the middle of a large room, but that animal will display considerable distress because it cannot see any other sheep. If it cannot see any other sheep, it means it is in a very bad position.

Separating pain from distress and stress is an ongoing problem. If we look at behavioural studies, we can make a little more progress. Animals do have set behaviours that we can associate with being hurt. Although the problem there is — and it is kind of obvious if you think about it — behaviours are situation and species specific. By that I mean that your response to one particular pain will be very different from your response to another pain — a pain in the belly versus hitting your thumb with a hammer. Your response is very different.

Acute and chronic pain is part of it, but also the pain you receive when you hit your shin on the edge of the table, and your response to that, is different from the ongoing pain of osteoarthritis. A significant challenge is that we are looking at a broad spectrum of different types of pain.

The other problem that we face is that different species of animals respond differently to the same stimulus. I am sure honourable senators have watched the Discovery Channel type shows on television. In those shows, you will see wildebeest or zebras with large flank wounds that have been inflicted by lions and cheetahs, and yet they are apparently grazing quite normally and showing no major behaviour changes.

In the situation in which herd animals exist in the world, it is specifically to their advantage not to display overt behaviours. If they do, they can be pretty sure that they are the next one on the predator's list. Predators are walking around the edge of the herd looking for animals that are behaving abnormally. It is a survival characteristic not to make a major display of painful stimuli. That does not mean to say that they do not hurt, but they are thinking, "Wow, that hurts, but I had better not show it, otherwise I am a lion's breakfast."

Equally though, this means that predators can afford to show pain. It is a luxury. Many people own dogs and cats. We all know that if you step backwards onto the dog's foot, you might think you have torn its head off, the howling and the squealing that goes on. That is because dogs, because of their association with man, can afford the luxury of overtly displaying pain.

Then we move on to man. Man can really afford to display pain. We are the ultimate predator. On top of that, we gain a social benefit, in that our colleagues will come to our aid. Man is a bad example upon which to base conclusions about pain.

As I said at the beginning, all our evaluations in animals have to be about what we

know in man, because only man can specifically describe the nature of pain.

The verbal factor is very important in how we understand pain. If you think about it, you describe pain with a kind of sophisticated use of adjectives that does not exist in many other areas in which we work: acute, chronic, stabbing, dull, throbbing, burning, we use all of these words and they all help the medical practitioners to evaluate what we are dealing with.

How can we do that in the animal world? The answer is that we must give it our best shot. The likelihood is that, as far as we can tell, animals do feel pain. Why do I think this? If I can give you a childish analogy, let us say we have this bunch of mechanics in the middle of the room here and that is an engine, a transmission, four wheels, a hood, a trunk and a steering wheel, and it goes "vroom, vroom, vroom," or when you press the horn it goes "beep, beep." I would be pretty certain that was a motorcar, but I could not be absolutely certain unless I could get in and drive it. That is somewhat how we view pain in animals. We can be pretty certain that they are in pain, but unfortunately, with animals, we cannot get inside and drive them. We cannot say with 100 per cent, absolute certainty that those animals feel pain. However, all I can say is, they go "vroom, vroom," and "beep, beep," so I am pretty sure they are.

Dr. Shelley Adamo, Researcher, Dalhousie University, Department of

Psychology: Honourable senators, I am an invertebrate biologist and I work with insects as well as cephalopods, specifically cuttlefish. I am interested in their behavioural physiology. I was asked to answer the question of whether invertebrates feel pain. I will try to answer that for you as best I can.

Invertebrates are classically defined as animals without a backbone. That includes insects, clams, squid, starfish, and those sorts of animals. Basically, anything that is not a bird, reptile or mammal is probably an invertebrate.

My colleague has already talked about pain. We all have a sense of what pain is. I want to point out one aspect. Pain is not just your response to an aversive stimuli; it is the emotional content of your response that is pain. That is important in the definition. That is why it becomes very difficult when talking about invertebrates. What you are really asking is whether invertebrates have the capacity for some sort of emotional response. That is what you really want to know.

What sort of thing might you look for? As our colleague said, you could try to see whether there is some sort of writhing or struggling that would make us think that if we were doing that, we would be in pain. The difficulty is that all organisms, including bacteria and protists and things that have no central nervous system, and which we are quite confident cannot feel pain, will do those things. They will writhe and attempt to escape from restraint and move away from an aversive stimulus. Just because you have a response to something unpleasant does not necessarily mean that you feel pain.

Scientists have three basic lines of evidence that we try to assess to give us some understanding of whether or not invertebrates might feel pain.

First, we look at why there is pain at all. Why do any of us, or any animal, have pain? The best answer we can give is that pain is an important function as a teacher, as a tool, in the sense that, for vertebrates at least, where much of our behaviour is learned and not genetically pre-programmed, we need to learn from our environment. Pain is an efficient teacher and tool for that learning. Invertebrates tend to be very short-lived, often in the order of days. For most there is no parental care. That means that if you are a fly, you hatch from your egg, you go through your larval development, you become an adult. All your behaviour, including how to hunt, mate and do all the things you want to do as a fly, must be more or less genetically pre-programmed because there is no one to teach you. The fly mother is long dead. There is no fly society for you to learn from. There are some exceptions, like bees, but those are quite rare.

The other factor we look at is what we call the "neural capacity" of invertebrates. To have some sort of emotional ability, we think that you need a certain degree of sophistication in your nervous system. That is why honourable senators have these pictures before them. I just want to take a look at some invertebrate nervous systems.

Invertebrates have very small brains. That is one thing you should know. Their nervous systems are many times smaller than ours. They have many fewer neurons and they are organized differently.

If you look at figure 3.5, these are three different kinds of insect. What I want you to see is the fact that even within the insects, their brains look different. The dark black stuff is the brains. The organization is also different. What they all have in common is that the brain is not all in one place. Our brain is all in one part of our nervous system, but the insect has several mini-brains.

Computational neuroscientists believe that if you do not put all your brains in one place, you have less computational power. By putting all our brains together in one package, we have more computational power. Not only do vertebrates have all their brain in one place, they have many more neurons. The neurocapacity of invertebrates is much less. Is it too small to have an emotional response? That we do not know. However, on balance, many people would say it is.

The last thing we can look at is the behaviour of invertebrates. How do they behave? If you look at their response to aversive stimuli, it is very different from ours. They really are alien types of animals. It is difficult for us to imagine what their emotional response would be like if they did have one. For example, locusts will writhe if you spray DDT on them.

It is a neurotoxin; it destroys their neurons. Not surprisingly, they will have some sort of motor reaction. However, if you damage the leg of a locust, it will continue to walk on it with the same force as on its undamaged legs. It is not that the

locust needs to use that leg; as an insect, it has six. You could remove that leg entirely and it would walk quite well on five. It ignores that signal for reasons we do not quite understand.

Another thing that will happen is, if a locust is busy eating, a praying mantid could come from behind and start to feed on that locust. The locust will continue to feed on the grass until the mantid has entirely consumed it. They do respond to aversive stimuli, and yes, they can learn. However, their response is very foreign to us. On balance, most scientists believe that insects, at least, do not feel pain in a way we would understand.

The one exception that is sometimes made is for cephalopods, animals such as octopus, squid and cuttlefish. They have a larger brain that is more or less coalesced in one place. Their brain is about the same size as a fish's brain.

We do not know very much about these animals. We do not know about their hormonal response to stress or their behavioural responses to aversive stimuli, so there is not much we can say. Most scientists, because of the size of these animals' brains, like to err on the side of caution by saying there is potential they could feel pain, even though we have no evidence of it. For the rest of the invertebrates, the consensus would be that it is unlikely that these animals can feel pain. However, as my colleague pointed out, it is not a question that we can ever answer with certainty.

The Chairman: Thank you very much, Dr. Adamo.

Senator Beaudoin: I must say first that I am impressed by those studies. It must be difficult to know exactly what an animal may feel.

Dr. Livingston, I think you said clearly that there is no absolute certainty that they suffer from pain. What about the degree of probability? Is it very high or is it tentative? I understand that it is not absolute, because they are so different from us, but the probability is there, is it not?

Mr. Livingston: Yes, indeed. I would say, for the case of mammals, it is 99.99 per cent.

Senator Beaudoin: Is it not 100 per cent?

Mr. Livingston: I never say never, but I never say always. Nothing is 100 per cent.

Senator Morin: This is the difference between a scientist and a lawyer.

Mr. Livingston: For the mammals, it is 99.99 per cent likely.

Senator Beaudoin: I understand there is a strong probability. The conclusions are strong.

Mr. Livingston: Being as absolute as any scientist will be, I would say that mammals feel pain.

Senator Beaudoin: We have to legislate, and many around this table are interested in more adequately defining what an animal is. It is really difficult.

The first witness, in my opinion, should certainly be a scientific person. The thing to do is to draft the bill as accurately as possible. We cannot do more than that.

My impression, *prima facie*, is that the definition we have in the bill is too ambiguous, but I would like to know from a scientific person what you think.

Mr. Livingston: It is, as you say, scientists versus lawyers.

Senator Beaudoin: I thought it was just a joke.

Senator Morin: The scientists will lose.

Mr. Livingston: We will be sued, if nothing else. I think a good example of that was when the British government asked their chief veterinary officer whether humans could ever contract BSE from cattle. He said it was very unlikely, but they wanted an absolute answer. In the end, he grudgingly said no, they cannot. Well, we have 150 cases out of a population of 50 million, which is very few, but I think he feels pretty bad about it. My answer is, in the case of mammals, the evidence is excellent that they can feel pain. We have much less data in the case of birds, but the evidence we do have is pretty good. We have to keep working on those parrots, so they will tell us.

It then goes down proportionally with reptiles, amphibia and fish, and the reason is that we have not put the effort into answering the questions. One of the problems with many of the lower vertebrates, the fish, the reptiles, the birds and the amphibia, is that we are not quite sure how to ask the question. In science, you only get the answer to the question you ask. How do you ask that question of whether this animal is feeling pain? It cannot be the simple avoidance reactions, because that would only deal with the acute pain issue.

In humans, the majority of pain treatments are for chronic pain. The behaviours associated with ongoing pain are very different from the behaviours with acute pain.

If you step on a cat's tail, it will yowl and climb up the curtains. If you have a cat that has a tumour in its abdomen, it will quietly go away and sit under a cupboard in the dark until it dies. The question becomes, how do you ask that of a non-mammal species? We know about cats, dogs, horses and cows, because we live with them on a daily basis and we have a lot of observations of them to build on. It is a familiarity thing, but I think the evidence available is sort of proportional to

the amount of time we spend studying them.

Senator Cools: I would like to welcome the witnesses and to say that listening to their remarks reminded me of a long time ago, in my days of studying experimental psychology and the activities of rats and other animals, particularly in the field of instinct. As the witness was describing, flies are essentially programmed with everything they need to know immediately. Too bad human beings could not do that. It takes a lifetime of training, and even then, we are still not sure.

Anyone who has ever cooked a pot of lobsters will know that they try to jump out of the hot pot. When I was a little girl, my mother would busily get us away from the stove. My question to you is a bit more scientific and verging on the neurological. You are certain about the class Mammalia in the study of pain. I wonder if one or both of you could tell us a little more about the central nervous system's structure and its development in organisms — and I am careful here not to say "animals" but "organisms" — that allow it to sense pain. Pain, at the end of the day, is a sensation.

Ms. Adamo: I will start with pain being a sensation. Any animal, from a hydra, which has the simplest type of nervous system, to something like a cephalopod, which has a complicated nervous system with millions of neurons, can sense something. However, we would not say the hydra feels pain because it is unlikely that the hydra has an emotional component to its aversive response. The hydra has sensory cells that are interconnected to inter-neurons, and those inter-neurons are connected to motor neurons.

When the sensory cell, the mechanoreceptor, is activated, particularly if it is activated strongly, it will go through a circuit loop that will tell the motor neuron to contract. In the entire circuit, you might have a total of five to seven neurons. We do not think — although how can we know — that within those five to seven neuronal circuits the hydra has the capacity to feel pain. In other words, it is a motor circuit, in the same way that a doorbell rings when you push it. It does not mean the doorbell is happy that somebody is here. It means an electrical circuit has been activated. The hydra is at the same level.

The difficulty we face and the committee faces is this: Where do we want to draw the line? That is the problem. The best scientific evidence is that, if you go from the hydra to more complicated nervous systems that have more neurons, and where nervous systems are more coalesced, that seems to be important for higher computational power.

That reaches its epitome in the vertebrates. The highest invertebrates are the cephalopods. Everything else has a distributed nervous system and probably five orders of magnitude fewer neurons. We are not taking just a few less neurons, but millions fewer.

I do not know if that helps you, but I would say anything that has a distributed

nervous system and less than about 100,000 neurons is probably not capable of feeling pain. That is based on all these indirect lines of evidence that we have.

However, we are not certain, and I am much less certain than Dr. Livingston is, that mammals feel pain. In some way, you may feel that we are selling these organisms short. However, because of their natural history and their behaviour, it seems unlikely to me, and we do not have any evidence for it when we look at their behaviour.

Senator Cools: Both of you can testify with clarity and certainty that the class Mammalia can feel pain, but you are not too certain about the lower orders.

Ms. Adamo: I am deferring to him on birds and reptiles.

Senator Cools: Therefore, the question we have to answer is if someone went to a spot in the bush somewhere and wilfully vandalized the environment by killing 100 crocodiles —

Mr. Livingston: It is the key question, yes.

Senator Cools: It is a difficult question. Is there a wrong being done in and of itself, even if the animals do not feel pain? I am saying "crocodiles" because they are remote from us. We all know that class Mammalia can feel pain. For example, a couple of months ago, I watched a neighbour's dog going at the squirrels, and I could see one little creature wrenching and trying to get away. As a matter of fact, we were upset. It was an unpleasant sight.

Yet there are certainly areas that I would be prepared to criminalize that I consider to be just bad, such as anti- environmental behaviour, which may not fall into your classification of certainty of pain, as in class Mammalia. Am I right that it is a class?

Ms. Adamo: Yes.

Senator Cools: I did take biology. I remember a little.

Mr. Livingston: That goes back to our tendency to judge everything by human standards. One of the problems with making those judgments on non-mammalian vertebrates like birds, crocodiles and fish is that as humans, we place an enormous amount of our reaction to the animal's response on things like facial expressions. Chickens, crocodiles and fish do not have very expressive faces, I am afraid. For example, you stare through the glass at a fish, and you think, "Is it angry?" It is difficult because the only absolute yardstick we have is ourselves.

Consequently, since humans do base so much on things like facial expression, animals that do not have the ability to change their facial expression could lose out. If we want to err on the side of safety, I would want to include the other vertebrates. However, I do not know whether Dr. Adamo would agree.

Ms. Adamo: I do, but I do not know if you would want to criminalize — you might — someone who boils lobsters or wantonly decides to crush snails. I am not sure of the intent of this proposed law.

Senator Cools: Can you go back to my original question, namely, the neurological development in species that allows them to sense pain? Could you give this committee a brief description of those parts of the brain that sense pain?

Mr. Livingston: We use the term "nociception," which means a response to a noxious stimulus. The receptor on your finger on a hot plate gets a stimulus. That is not pain. That is just stimulating a receptor. That then moves up the ulnar nerve through the brachial plexus into the spinal cord. That is still not pain. That is a message. It goes into the dorsal horn of the spinal cord and splits up. Some goes up, some goes across and some goes around to make a motor reflex arc, where you do not think about moving your hand. Your hand moves before you think of it. Those issues are not pain. Those are neuronal events similar to what Dr. Adamo described in the invertebrates. That goes up the spinal cord, to the integrated areas through the medulla, and up into the hypothalamus. In the hypothalamus, you see many of the other reactions that come with pain, such as the sudden intake of air, or the gasp. You see the release of hormones or the change in blood pressure. Those are hypothalamic. There is still no pain; that is a reflex. It then eventually moves into the cortex, and we believe you have a perception at the cortical level. The answer is if you are talking about pain, you have to have a cerebral cortex, we think, in mammals and the other vertebrates. That is why under certain laboratory conditions, people are allowed to do experiments on decorticated animals, that is, where the cortex has been taken off. That animal is not supposed to feel pain.

Senator Cools: I know what the cortex is, although I am not sure that all committee members do. Perhaps you could give the committee the shortest definition you can think of.

Mr. Livingston: Referring to this diagram at the back of my colleague's paper, the oval part at the front is the cortex. In humans, of course, that makes up a significant proportion of the brain. It makes up significantly less of the total brain weight in species like rats and mice. It is even less in frogs and birds. Birds have a very big cerebellum, the area associated with motor coordination, which is why they can fly. The level of motor coordination needed to fly is much greater than a rodent needs to walk. In fish and amphibia the olfactory lobes are very large because those animals rely to an enormous extent on the sense of smell. They do have a cortex; it is just not quite as big.

Senator Jaffer: I want to thank both of you for this very interesting presentation. I am not as knowledgeable as others on scientific matters so I may require more of your patience. In order to get a conviction, it must be proven in a court of law beyond a reasonable

doubt that the animal has felt pain. Am I correct that all vertebrates have a cortex?

Mr. Livingston: Yes.

Senator Jaffer: Therefore, they have capacity to feel pain.

Mr. Livingston: Most likely.

Senator Jaffer: In court, "most likely" may mean yes or no. However, I think the bill is clear that "animal" means a vertebrate, so any animal that is a vertebrate is covered.

I am concerned about the second part, where it says "any animal that has the capacity to feel pain." That is where I think we need your help. Are there any other animals that you can say for sure feel pain?

Ms. Adamo: I assume that is why I was asked to be here. As a scientist, I believe that you should be precise rather than leaving it open. If there are particular animals that you want to protect, you should include them.

Of all the invertebrates, the only group that you might want to include would be the cephalopods, which are the squid, octopus and cuttlefish, because they have a large brain, the same size as that of fish. They do not have a cortex, but they have cortex-like structures. Even so, we have very little evidence that they feel pain. If you want to be very conservative, that would be the only group of invertebrates that I would include.

Senator Joyal: Senator Jaffer put her finger on the issue in the proposed definition of "animal." We are asked, as laypersons, rather than scientists as you are, to define as "animal" any living being that has the capacity to feel pain. Our perception, upon first reading this, was that it was an open door to unknown territory. We are legislating to amend the Criminal Code, not to give research grants. We are creating offences that would be subject to serious penalties in order to ensure that we are in tune with proper standards of contemporary society.

I listened very carefully to you, Dr. Adamo. You mentioned that with less than 100,000 neurons there is no capacity to feel pain.

Ms. Adamo: I think it is unlikely.

Senator Joyal: I was trying to figure out which levels of living beings could be included in that. I asked my colleague, Senator Sparrow, who lives in the Prairies, whether he thought that grasshoppers were included in that group. When I was a kid, my brother and I used to catch grasshoppers, grasp them by their wings and squeeze them a little, and some liquid would come out of their noses. We would say, "Give me honey or I will kill you." The poor insect would give its liquids and then we would let it go. Of course, if the insect did not give its liquid, we would tear off a leg. That is cruelty; that is injury. We were removing a leg. It is pain in a

way, because when we squeeze the wings it provokes a reaction. As Dr. Livingston said, it is probably a self-defence reaction.

However, I am trying to figure out which categories of living beings we include in that part of the definition that says "has the capacity to feel pain." You tell us that it is necessary to have a cerebral cortex to feel pain. Perhaps we should say that the definition should depend on whether there is a cerebral cortex, because science can come to a conclusion based on that.

We are still wrestling with whether insects are included in this.

Ms. Adamo: I would not include insects on that list. That would be the scientific consensus. I can leave papers, if you like, for extra reading. That information goes into more detail as to why we feel it is unlikely that insects as a group feel pain. It is best to be specific, if you know which animals you want to include and which ones you do not.

A grasshopper has between 100,000 and 800,000 neurons. They are more highly developed. Of those neurons, 80 per cent are involved in first or second sensory information.

In our brains, it would be much less. Most of the neurons in our brain are involved in information processing. Only a small portion of grasshopper neurons are involved in information processing because the grasshopper does not process as much as we do. They have a smaller and more distributed nervous system. That is one of the main reasons why we do not think they feel pain.

If you were to leave the proposed law as it is written, I suppose someone could argue the matter in court.

Senator Joyal: Is your suggestion to add a more precise definition, if we wish to cover animals that are not vertebrates?

Ms. Adamo: If honourable senators do not wish to include invertebrates, such as insects, lobsters, clams and oysters, then this proposed legislation is worded so vaguely that, at least as a scientist looking at it, it is possible that someone could think, for example, that boiling lobsters would be something that could be prosecuted. Certainly, People for the Ethical Treatment of Animals are opposed to boiling lobsters. The way the bill is written, it does not seem obvious that certain animals would be excluded.

Senator Joyal: You mentioned something that is very important to the scientific community. You said that when you remove the cerebral cortex, the animals cease to feel pain.

In the Canadian animal code for research — we were supposed to get the code from previous witnesses and have yet to do so — is there a provision that says that when a university lab does scientific research or a pharmaceutical company

conducts research for industrial purposes, that they must remove the cerebral cortex of the animal so that it does not experience pain or suffering?

Mr. Livingston: I believe that is the case with certain animals.

Senator Morin: Mr. Chairman, my next question deals with the council of animal care and perhaps Mr. Gauthier could join the group. This is an important point. I have the impression that things are becoming muddled. Perhaps Mr. Gauthier could clarify the position of the Canadian Council on Animal Care.

The Chairman: Mr. Gauthier, please join the panel.

Senator Joyal: Mr. Gauthier, I wish to know if, in the code that has been referred to by previous witnesses, the various animals are classified for research and if guidance is given on how to treat those animals. My question is: Is there a provision in that code that says that when animals are used for experiments in research facilities, that researchers are invited to remove the cerebral cortex so that the animal does not feel pain?

Dr. Clément Gauthier, Executive Director, Canadian Council on Animal Care: Honourable senators, 30 copies of the code were sent to the committee three days after I appeared; you should have them somewhere.

Senator Morin: I got it.

Senator Joyal: However, Senator Morin is not a member of the committee.

The Chairman: We will send you another copy, Senator Joyal.

Mr. Gauthier: Institutional animal care committees make the decisions at the local level on the basis of guidelines and policies. We have five levels of invasiveness of techniques that we ask the experimental researchers to describe when they submit a protocol to the local institutional animal care committee for ethical review.

The sort of experiment that you mentioned would be classified very likely as a "D." The council also supervises and assesses the use of 30 species. Most of them are vertebrates. We cover only the cephalopods within the invertebrates. The council does not cover experiments done with any other type of invertebrate for the reasons that you have just heard. That is, there is no scientific consensus to the effect that other invertebrate species should be covered on the basis of capacity to feel pain.

We do cover all the vertebrates and cephalopods. The use of those animals must be reported to the council on an annual basis. It depends on the level of invasiveness. For example, if they only observe animal behaviour, it would be classified as an "A" or "B," normally, which is the lowest level on the scale.

However, if some toxicity testing is done, then it will necessarily be classified as a "D." If there is high toxicity involved, it will go to an "E," which is the highest level of invasiveness that we allow, because we foresee potential for pain. It should be equivalent to pain in humans that would be unrelieved by analgesia and anaesthesia. We ask the researchers to classify that before they submit their protocol. The committee evaluates that. The committee also evaluates what the researcher will do to mitigate pain, depending on the level of invasiveness. Do they plan to use analgesia and anaesthesia? What type, if any, is involved? There are other ways, besides removing the cerebral cortex, to cut pain, including using drugs of various types.

Senator Joyal: Would Valium be an example?

Mr. Gauthier: There are various drugs. The committee is composed of veterinarians, scientists, users and non-users and public representatives. We are talking about 224 committees. They evaluate that.

The answer to your question is that if the protocol calls for the removal of the cerebral cortex, this must be done using strict surgical practices that will be overseen by veterinarians before permission will be given to use the animals. That is not a right. This is a privilege that they receive. The whole system works in that way. We do have strict requirements, depending again on the level of invasiveness that is underlying the use being made of the animal.

Did I answer your question?

Senator Joyal: Yes, thank you.

Senator Morin: I would like to simplify things.

Mr. Gauthier, do not go into details. It is very important for people to know clearly with what we are dealing. You are the executive director of the CCAC. You oversee scientific research in the country as it deals with animal care. There are few areas of scientific research that you do not oversee; is that correct?

Mr. Gauthier: We oversee the care and use of animals for scientific purposes, regulatory testing and teaching.

Senator Morin: Your guidelines prohibit the induction of unnecessary pain in scientific experiments?

Mr. Gauthier: Yes, that is right, unless they are studies on pain.

Senator Morin: That would be necessary. I am using the word "unnecessary." I am trying to be as clear as possible. Like the proposed legislation, the code prohibits the production of unnecessary pain in animals in scientific experiments?

Mr. Gauthier: That is correct.

Senator Morin: To which animals do these guidelines apply?

Mr. Gauthier: The guidelines apply to 30 species of animals and all animals that are under the phylum of vertebrates, including the mammalians. That also includes birds. Within the invertebrates, the cephalopods are the species mentioned.

Senator Morin: With the exception of cephalopods, in essence, they apply to all vertebrates. Is the lobster a vertebrate?

Mr. Livingston: No, it is a crustacean.

Senator Morin: Is Senator Joyal's grasshopper a vertebrate?

Mr. Livingston: No, it is not.

Senator Morin: That is clear then, with one exception: Fish are vertebrates. Reptiles and crocodiles are vertebrates as far as the council's definition is concerned.

This is, therefore, a strict regulation. On what basis did the council take the decision to include vertebrates and exclude other animals?

Mr. Gauthier: The decision was made on the basis of scientific evidence, on the scientific consensus that has been developed over the years that these animals can feel pain.

Senator Morin: Is it the type of evidence we have heard this evening?

Mr. Gauthier: Exactly.

Senator Morin: The only animals, with one exception, that would be covered under this proposed legislation are vertebrates. This would be pretty well in line with what is done in the scientific community and elsewhere in the world.

If this were the definition applied here, it would fit with what is being done around the world as far as regulations of this type are concerned?

Mr. Livingston: It would be at the front end. The United States' protection of animals act is not very good. They still exclude mice, rats and cephalopods.

The other thing I would add to what Dr. Gauthier has mentioned is that it is important to remember that the CCAC guidelines are evolving documents. They are constantly upgraded as new scientific information becomes available. Also, there are more specific recommendations for specific species. A good example is that the CCAC has just published their latest guidelines dealing with wildlife.

It is an ongoing thing.

Senator Morin: This is my last question. Would cephalopods not have been on the list 10 years ago? When was that added?

Mr. Gauthier: It was a while ago, in the early 1980s.

Senator Morin: Because this is an evolving thing that may change over time, would you advise us to be very specific and put in the vertebrates and cephalopods, or just leave it at those animals who can feel pain?

Senator Joyal: It says in this part that an animal ``means a vertebrate, other than a human being, and any other animal that has the capacity to feel pain."

Senator Morin: What do you think of this definition?

Mr. Livingston: The ``any other animal" makes me a little anxious.

Ms. Adamo: I feel the same way. We have known for 400 years that cephalopods have big brains, so they have been included as ``honorary" vertebrates for at least a century, with very little other evidence other than that they have a large brain. That we have not thought insects feel pain or deserve special protection has also been true for a long time. I do not see that changing any time soon. The more information we learn about them, the more we see that they are wonderful beings and have amazing abilities, but after having studied them for a very long time, they are still so alien to us. I think it is true that we would have difficulty in recognizing pain, as Dr. Livingston was saying. Even when trying to keep an open mind, the observed behaviours, the nervous systems they have and the mechanisms they use do not make us think they are experiencing pain.

My concern is that if you leave it wide open, I do not know whether that will create a problem with frivolous suits against people who boil shellfish. I am from the Maritimes. We eat lots of lobster, clams and oysters.

My understanding is that this was intended to genuinely protect animals from suffering. I am not sure if you want the law to be extended to animals that are probably incapable of suffering. If that is not your intent, you may want to make that clear.

Senator Morin: The proposed definition is vertebrates and any other animal that might feel pain. Do you think that is too broad?

Ms. Adamo: Because of the definition of ``pain," although we have made it sound like it is clear, it could certainly be argued. Again, I am not a lawyer, so I am not sure how the balance of evidence would work. I do not think I could prove to someone that a lobster cannot feel pain. The balance of evidence is that it is

unlikely, but someone else may interpret the information differently.

Senator Joyal: That is the problem. There is a doubt.

Ms. Adamo: It depends on your intent.

Senator Joyal: I think it is very helpful to us, because you understand what we are wrestling with. I want to make a clear distinction for Mr. Gauthier. You have the responsibility to enforce a code. I assume there are penalties, but the penalty in the bill is five years in prison and a \$10,000 fine. That is what we are dealing with here. That is why it is very serious. There is a process in the scientific community if there is a breach of your guidelines. I would say humbly that there is no equivalent, in terms of the consequences if you breach the guidelines, versus breaching the Criminal Code. That is why we are wrestling with this.

Mr. Gauthier, is there a lobby group that fights to prevent the use of animals in research?

Mr. Gauthier: Yes, it is well known. I believe that on December 11, when we appeared, Ms. Borwein made the case that it does exist. There are pros and cons, but the role of the council is to be a quasi-regulatory body. We take for granted that society accepts the use of animals under certain conditions. We are there to make sure that those conditions are in place, and that there is a common will and collaboration. We do establish standards and have for 34 years. However, there are groups that would like humans not to make any use of animals, either for food or in science. These groups exist and are very active.

It is not my role to describe them. Our role is to make sure the use of animals is an optimal one that does not waste them. The use should be under proper conditions to reduce pain and distress as much as we can. That is what we do.

Senator Joyal: That is what we are concerned about, too. When you appeared with your other colleagues, I think you felt that we were preoccupied around the table with making sure that we are doing the right thing, in terms of the objectives you pursue as a scientific community.

When a human being has a kind of psychosomatic pain, a doctor prescribes a placebo. You would have the impression that the person is in terrible pain, but it is psychological. The doctor will give what we called, in the early days, a "pain pill." Today, the pain pill might be something different from what it was then, but in those days it was a placebo. It was sugar water.

You would be convinced, looking at them, that the person is in real pain. Can a vertebrate have the same kind of reaction?

Mr. Livingston: Good question. Most research in human pain is now associated with what is called "neuropathic" pain. That means pain without any lesions or

pathology. It is associated with specific diseases, a good example of which is diabetes. Diabetics may have increased sensitivity to all pain. They are looking at a variety of treatments. They do not respond well to morphine and those sorts of drugs, but some of the newer anti-convulsants work reasonably well, for example. Does it happen in animals? Yes, I think so. I think we have seen examples with dogs that have had their limbs amputated. They seem to suffer from phantom limb pain, the stump pain. There is a lot more interest now in phantom limb pain in humans because of landmines, and Africa, where they have been cutting people's arms off.

Therefore, much more work is associated with phantom limb pain. That is a neuropathic pain because the limb is not there. I remember one case I was involved with where the young lady had lost her arm. She had a mental vision that this arm still existed, and she used to get a terrible cramp in the palm of her hand and her fingers would curl up. She knew if she could just open her fingers, the cramp would go, but she could not, because they did not exist.

That sort of pain is very unremitting, very depressing and very difficult to treat. Does it occur in animals? I think probably it does. Certainly, it occurs in some of the ones we see, like dogs, where we do have evidence that they are suffering that sort of pain.

You were asking about including invertebrates in the proposed legislation. I think this is an excellent bill, and I have supported it all the way. One of my concerns is that its impact on the vertebrates could be diluted if an enormous amount of attention were paid to the invertebrates. My worry would be that the protection for the animals that really need it could be diluted.

Senator Joyal: You mean with the second part of the definition.

Senator Morin: That is a very good point.

Mr. Livingston: That would be my concern. What you are doing for the vertebrates and the mammals is excellent, and the right thing to do. However, if that were spoiled by something we are not certain about, that would worry me.

Senator Nolin: I am trying to be as helpful as my colleague, Dr. Morin. Even though the pain question and the definition are not important for vertebrates because the bill will include them, with or without pain, the problem with the pain question is in one of the offences. If someone is accused, there must be evidence of unnecessary pain. That raises the question of whether there is pain. You said, Dr. Livingston, that animals do feel pain; let us agree on that.

Here is the problem. We do not have much jurisprudence on that, but we have one case from the appellate court in Quebec. Justice Lamer, who was then the judge in the appellate court, ruled that the level of pain is the important component in establishing whether it is necessary or not for a human being to use a certain

method to kill or inflict pain. My question is this: Now that we agree that animals do feel pain, independently of their class or group, how can we evaluate the level of that pain?

Mr. Livingston: That is an interesting question in terms of the non-mammalian vertebrates. We can evaluate levels of pain in the same way as for humans. For humans, the World Health Organization has what it calls a "pain table" that goes from slight to moderate to severe to very severe. It is often applied to the appropriate level of medication that can be given. It particularly refers to cancer treatment. There are some guidelines on what drugs to use for what level of pain.

The CCAC asks the experimenter first to suggest a level of pain, and then it asks the local committee whether that is accurate and appropriate. We do have some levels of pain associated with the mammals.

Interestingly enough, that is one of the challenges we faced with the non-mammals in terms of their behavioural responses. What I mean by that is, if you slowly increase the level of pain in humans, their level of escape activity or avoidance or reaction increases. As it gets more painful, they struggle harder.

If we increase the stimulus in non-mammalian vertebrates, they do not have this graded response. They seem to have an all-or-nothing response. There seems to be a threshold at which a crocodile or a bird will suddenly seem to say, that hurts, and then respond quite violently. They also seem to respond at the maximum level. You can think of how a bird reacts — suddenly, it is flapping and squawking.

That is a very interesting question. In fact it is something we have been struggling with in trying to evaluate the use of analgesic drugs in the non-mammalian vertebrates. The models we have for mammals do not work in the non-mammalians. There are various evaluations of pain levels available for most of the CCAC-listed species.

Senator Nolin: I have one last question on the famous lobster. My colleagues have not told you, but I raised the question of lobster in the chamber. Do they feel pain?

Ms. Adamo: I do not think so, but I cannot tell you for sure. I would say no.

Senator Morin: They are not vertebrates.

Senator Nolin: It is uninformed to say lobsters feel pain?

Ms. Adamo: They have good reflexes. They have some of the fastest escape reflexes in the animal kingdom because they have electrical synapses, unlike you, who have chemical synapses. Therefore, they will react vigorously and quickly, and they will do it without their main brain.

Senator Nolin: Translate that for me.

Ms. Adamo: If a lobster can think, the only piece of tissue it thinks with is its main brain, in its head. You can remove that, seal up the hole with wax, and it will behave exactly the same way. Its escape reflex is independent of its brain. That is all you see when an animal is trying to escape from a pot.

Senator Nolin: He is not trying to escape because he is feeling pain.

Ms. Adamo: No, he is trying to escape because he has a motor reflex that tells him to respond to the sensory stimulus in that way.

Senator Nolin: You are defending your part of the country.

Senator Joyal: Just on that same issue of pain, clause 182.3 of the bill says, "negligently causes unnecessary pain, suffering or injury." "Injury" I understand. We cut a leg, for example. Our colleague, Senator Nolin, has raised the issue of pain. What is "suffering" in terms of your own vocabulary? Do we need that word?

Mr. Livingston: You can suffer without pain — for example, the suffering of isolation.

Senator Morin: Your sheep would suffer, but it is not in pain.

Mr. Livingston: That is right. There may be suffering in same-sex groups of animals that want to engage in reproductive behaviour.

It is an old issue that we have dealt with in terms of the stress/distress/pain triangle, as we call it. It has always been said you can have stress without pain, but stress will cause distress. Pain will always cause distress. Can you have pain without stress?

That is an interesting question. With regard to humans, the answer is probably yes. People do live with chronic pain, and if it is at a low level, they can adapt to living with the pain of arthritis or something like that. It probably does not cause them stress, but it probably does cause them distress.

Senator Morin: Should we leave in "suffering"?

Mr. Livingston: It bothers me.

Senator Morin: If it bothers you, imagine what it does to us.

Mr. Livingston: If I were to be called as an expert witness in a court and asked whether an animal is suffering, I could give an opinion, but it would be perhaps a less convincing performance than if I were asked whether it is feeling pain.

Senator Joyal: It is easier to prove pain than to prove suffering.

Senator Morin: Your example of suffering would be the sheep in isolation, but that is not really the intent of the proposed legislation.

Mr. Livingston: I assume it is not the intent.

Mr. Gauthier: If I may add some complementary information here on definition of terms, in the paper provided by Dr. Livingston he made reference to the definition of pain established by the International Association for the Study of Pain as follows:

An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

"Pain" is generally well defined internationally. The other word is "distress." At the CCAC, it is our understanding that when an animal is facing stress but cannot escape the source of it, the animal becomes "distressed," which is an incapacity to escape from the stressful stimuli.

These two words are clearly defined. The word "suffering" is sometimes used in a more relaxed way as a synonym for pain, but the words "pain" and "distress" have been clearly defined, and for good reason. Last year, the United States Department of Agriculture had to have those two words defined because they faced a legal initiative regarding pain and distress. The United States Humane Society began a lawsuit against them for not following their own regulations in this matter. Therefore, the Americans recently clearly defined those two terms, but they had already been defined by the International Association for the Study of Pain. Therefore, these terms are clear, while "suffering" is a nebulous term.

Senator Jaffer: Does failing to provide a dog with water cause pain, distress or suffering?

Mr. Livingston: In my opinion, that would cause the animal distress, but it would not cause it pain.

We use both words, which suggests that they have different meanings. Colloquially, we say "pain and suffering," which suggests that we mean different things.

Senator Joyal: The point is very important because it says "pain, suffering or injury," so it is any of the three.

Mr. Livingston: It does not have to be all three of them.

Senator Joyal: It is not "suffering and pain," or "suffering and injury." Each one can be the cause of the offence.

Senator Morin: Can you replace "suffering" by "distress"?

Mr. Livingston: That is a large legislative issue. Do you want to go there?

Senator Morin: Deprivation of water is in the proposed legislation.

Senator Nolin: The level of *mens rea* is much lower. The criminal intent component is not as complicated as in other types of crimes. If you do not provide food, water or air, it is your fault.

Mr. Livingston: That is addressed separately in the CCAC guidelines.

Senator Sparrow: I am more confused than when I came in.

With regard to non-vertebrates, a bee, for example, appears to sense fear or danger. A spider moves away quickly when it has a sense of fear or danger.

Ms. Adamo: A funnel web spider, for example, will move back into its funnel web when it receives sensory information suggesting that there is a predator nearby, but I would not say that the spider is actually afraid of anything.

Senator Sparrow: What about bees? Are they not afraid?

Ms. Adamo: I would not say that bees are afraid. Bees have a wonderful repertoire of behaviours, and they will go through them, but I think most of them are genetically determined. They have some wonderful learning abilities, but as a rule, their behaviour is quite set. They are first nurse bees, then they clean the nest, then they guard the nest, and then they become foragers. Everything happens at a set rate and they have certain stereotypical behaviours in response to certain sensory stimulation. You can explain their entire behaviour that way without invoking any sense of fear.

For example, when the bear comes to the hive, they have that in their visual and olfactory information. They are programmed to defend the hive, which means they sting the bear. They release alarm pheromones and do all sorts of things, but you could program a robot to do that. Would you say that because the robot could do those things, the robot feels fear?

As entomologists, that is how we have always interpreted insects. When you look into their nervous system, that is what you find. You can find little loops from the sensory system with a few inter-neurons going out to a central-pattern generator that controls the motor circuit.

We do not find the rich interconnection of many neurons that we do in other animals that make us think they have some emotional capacity. Although it may be wrong, our assumption is that the sort of emotional response you are talking about — fear, anger and any other type of emotion — requires a certain amount of cognitive capacity, more than just having a sensory circuit wired up to a few inter-neurons wired up to a motor circuit.

Senator Sparrow: Birds are vertebrates and can experience pain. Experience shows that if you clip a parrot's claws too close, it suffers pain.

Mr. Livingston: I did some experiments last year with one of my Ph.D. students on ducks, simply because they are a convenient species to use in Saskatchewan. We were looking to see whether we could alter various behaviours in response to pinching their feet. We turned the question around and asked whether human painkilling drugs stopped certain behaviour when we pinched their feet. The answer was that they did. Their blood pressure did not go up; they did not flap their wings.

The suggestion is that, if a drug that kills pain in humans returns their behaviour to normal when we inflict the stimulus, then they responded in the first place because they felt pain. It is a kind of circular argument. If a painkiller stops a behaviour, then you could say the animal was feeling pain when it originally displayed that behaviour.

Senator Sparrow: Proposed section 182.1 reads:

In this Part, "animal" means a vertebrate, other than a human being, and any other animal that has the capacity to feel pain.

Birds could fall into that category; is that correct?

Mr. Livingston: Yes, that is correct.

Senator Sparrow: If you did not want to include birds, how would you word that?

Mr. Livingston: You would have to say what classes of animals you wanted to include. The class would be mammalian and not avian, the birds, and yes or no for reptilian, and yes or no for amphibian, and yes or no for fish.

Senator Sparrow: To be clear, you would have to add those.

Mr. Livingston: If you wanted to exclude one, you would have to name the others. Vertebrates are mammals, birds, amphibians, reptiles and fish.

Senator Morin: Could you clearly repeat what are vertebrates in English?

Mr. Livingston: Vertebrates are mammals, that is, all the furry things; birds, they are the ones with feathers; reptiles, the ones without feathers or fur, and that includes snakes, turtles and crocodiles, the three big groups — there are lizards and a few other odd things in there; and Amphibia, which are frogs, toads and salamanders. Fish includes two big groups, the bony fishes and the cartilaginous fishes. The bony fishes are the regular fishes and then the cartilaginous fishes are the sharks, the dogfishes and the rays.

Senator Morin: The proposed legislation covers all of those as vertebrates?

Mr. Gauthier: Yes, that is correct.

Ms. Adamo: Primitive vertebrates are also included.

Senator Sparrow: In a human being, as pain increases, can it increase so much that eventually you do not feel it, even though you are conscious?

Mr. Livingston: That is an interesting question. It works two ways. Most of your senses can actually become desensitized. What I mean is that if you work in a noisy environment, you go deaf; your sensitivity decreases. If you work in a bright environment, your pupils constrict and you become less sensitive to bright light. The same is true with the sense of smell; the guys who work in the sewers do not smell them. If you smoke, it desensitizes your sense of smell. That is probably a survival characteristic.

In the first instance, as you are exposed to ongoing pain, it actually becomes more painful. It is the Chinese water torture type of idea. If I apply a fixed weight to the back of your hand of let us say about five newtons, at first it does not seem to be too painful. If I continue giving that same pain, it becomes more painful — I am doing that to myself now, and it is just about reaching it — and eventually it becomes really sore. That is probably a survival factor to prevent you from ignoring pain.

If I stick you with a blunt pen and keep pushing with it at the same pressure, you would eventually say, "Ow, that hurts," and move away.

Pain is kind of the opposite of the other senses, where you become less sensitive. With pain, you become more sensitive. The other thing we discovered recently in humans is what we call "peripheral" and "central" sensitization. Peripheral sensitization is if you damage and stimulate nerve endings in your periphery, they become more sensitive to pain. You have done this, I am sure. If you get a bruise or a whack with a hockey stick or something like that, the area that you got whacked on, which would originally have been a touch stimulus, becomes a pain stimulus. You touch a sore area and it hurts.

Similarly, we know now that if you are constantly exposed to pain at a low, chronic level, your brain becomes more sensitive to pain, not the periphery, not the bit on the outside, but your brain actually becomes more sensitive to pain and you respond to a lower threshold of pain or stimulus. Here I am referring to humans. We think we may have shown that response in dogs, cats and perhaps sheep.

Senator Sparrow: If you perform a Caesarean on a cow without using painkillers, the initial reaction is pain. As you progress with that Caesarean, the animal tends to accept the pain. It is not bawling or moving; it accepts that pain. What is happening there?

Mr. Livingston: You are probably looking at pain receptors in different tissues. The cow's skin, like ours, has many pain receptors. The uterus does not have much in the way of pain receptors to cutting, although it has pain receptors to stretching. The uterus is relatively insensitive to being incised. The stretching effect has to do with pain receptors in the peritoneum.

The brain has almost no pain receptors. You saw the Hannibal movie. The brain has no pain receptors. You can take the top of the skull off and you can touch the brain. People might see flashing lights or something like that, but they do not feel pain.

Senator Joyal: That is how they perform the operation for people with Alzheimer's.

Mr. Livingston: Yes, that is correct.

The Chairman: Dr. Livingston, Dr. Adamo and Mr. Gauthier, thank you very much. Your presentations have been very insightful.

The committee adjourned.