

The Null Hypothesis: Co-management doesn't work

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Introduction

For the past 40 years I have been an active participant in all aspects of co-management from biologist and facilitator to executive director, member and chair of several organizations. Over this time I have become aware of a few patterns that are both disturbing and endlessly repeated. I thought that a different approach to the whole issue might challenge the norms and inspire some readers to be more courageous and adventurous in how they address co-management.

To be consistent with my goal I have purposefully not employed standard academic methods or modes of communication. The following is basically a summary of my personal experience in the Yukon and Northwest Territories, augmented by a number of in-depth interviews with people involved in co-management organizations across northwestern Canada.

In the all-embracing spirit of the 13th North American Caribou Workshop I am writing this primarily for for northerners who belong to co-management organizations and who want to make a difference.

1970 B.C. (Before Co-Management)

When I arrived in Yellowknife caribou co-management did not exist. Such matters were in the hands of federal biologists. As a young man I listened to these old guys talk about caribou and what they thought was going on. In all such discussions they never mentioned what aboriginal people thought because that

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was not 'scientific'. After their 'field trips' were over they went back down south and wrote reports for the Canadian government.

These biologists were following in the footsteps of 'arctic explorers' who also traveled on the land with local people and wrote adventure books.

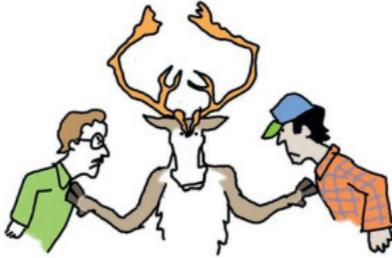
Sometimes the adventurers would report to Ottawa and decisions would be made about the north. This is how reindeer were introduced to the Western and





Eastern arctic. Aboriginal people were not involved in such matters.

Eventually, aboriginal people stepped out of the background and began to demand their rightful place in decision-making about caribou and everything else on the land. This is when co-management arrived in the north



1976 The arrival of co-management

Co-management organizations often arise from conflicts between aboriginal communities and governments. The organization may consist of local members only, or include government representatives as well. Usually, all fish and wildlife are included in the mandate but there are a few that deal only with certain animals like moose or caribou. Regardless, the intent is always to incorporate traditional knowledge and science into recommendations to governments and the means of doing so are pretty similar.



If you begin with the Hunting, Fishing, and Trapping Coordinating Committee in the 1976 James Bay Agreement, then co-management has been around for 34 years. After so long, it is time to ask, "Is co-management really doing what it was intended for?"

I have focussed on caribou co-management alone which is handled either by regional boards that include local herds along with other wildlife, or specific boards that span political boundaries to cover the entire range of large barren-ground herds. In all cases, however, the intent is the same which is to:

1976 - 2010

1. Bring people together to talk about caribou
2. Improve caribou management
3. Benefit caribou on the land

Everyone agrees that co-management has been very successful at bringing people together.

And a great deal of time has been spent discussing caribou management – mainly research.



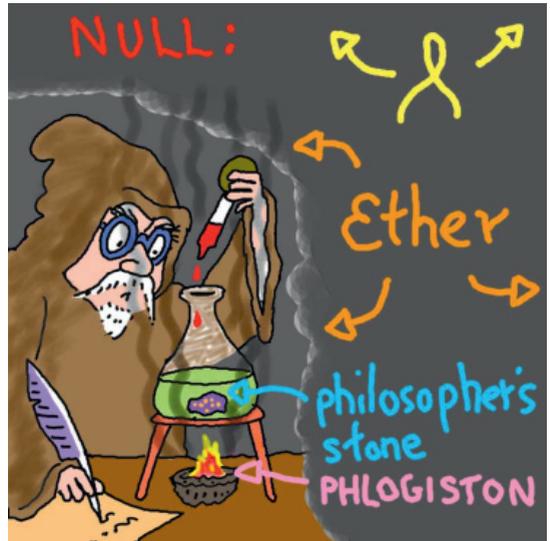
But what has co-management really achieved for caribou on the land?

This is what I chose to investigate. "What changes are happening to real caribou out there on the land as a result of co-management?" It's a tricky question. I did not want to fall into the trap of looking for facts that support the success of co-management. Instead I wanted to make sure I was not deceiving myself just because I wanted co-management to look good. This is why I chose the "Null Hypothesis" approach.

The 'Null Hypothesis'

The 'Null Hypothesis' was invented long ago by scientists who realized they were often fooling themselves. They wanted so much to find the answer they believed in that they would bias their experiments to support their theories. This picture shows four big mistakes that scientists made in the past because they wanted certain answers.¹

So, they invented the 'Null Hypothesis' which states that "Nothing (Null) is happening between the two things we are studying." Then they designed experiments to prove nothing was going on. And only if their experiments failed – *only then* would they begin to think maybe there was something happening.



¹ The top squiggle is Einstein "Cosmological Constant". He believed that the universe was stable but his equations said that it was expanding. So, he invented this 'constant' to make his equations say it was stable. Later, when he found out the universe is always expanding, he said it was the biggest mistake of his life. 'Ether' was the fictitious medium that scientists invented to carry light waves. 'Philosopher's Stone' was a hoped for element that would change base metals into gold. 'Phlogiston' was created to account for the loss of weight when anything was burned.



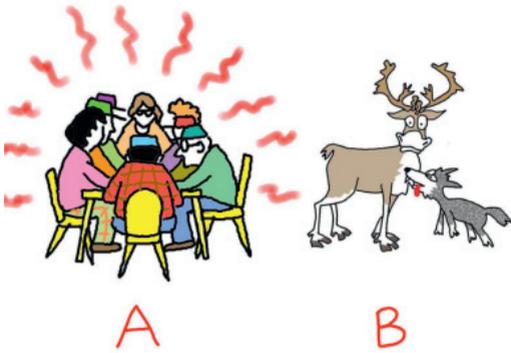
How the 'Null Hypothesis' works

Shown above are 'A' and 'B'. Is there a relationship between them? Is 'A' having an impact on 'B'? The 'Null Hypothesis' says, "There is no relationship between 'A' and 'B'". Imagine measuring 'A' and 'B'. Your observations show many changes in 'A' but no changes in 'B'. Therefore the 'Null' Hypothesis is true. 'A' is having **no effect** on 'B'.

This is what I did with co-management. My hypothesis says, "Co-management does not work. That is, co-management does not affect animals on the land." Then I started looking for information to support

that statement. I looked at 'A' (Co-management) and then I looked at 'B' (changes for caribou). If my observations showed 'no impact' (or only a tiny bit) I would say, "The Null Hypothesis is true." If my observations did not support this then I would say, "I must be wrong. Co-management does work – it must actually be affecting animals on the land. The Null Hypothesis is false."

Here is what I found from interviewing long time associates in co-management and also recalling my own experiences over the past 25 years.



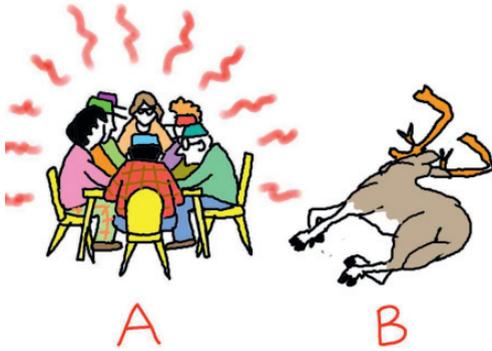
Wolves

Because every community in the north is concerned about wolves and caribou, every co-management organization has dealt with predation at some time or other. Often the discussions are very passionate and many solutions are considered.

But, from all I personally witnessed and all the people I interviewed, I could not find **one example** where co-management started something that truly reduced the number of wolves. Sometimes a group supported government wolf control, or called for other methods (Alaska style snaring) which had little effect.

Caribou are experiencing **no difference in wolf attacks** because of co-management.

The Null Hypothesis is true.



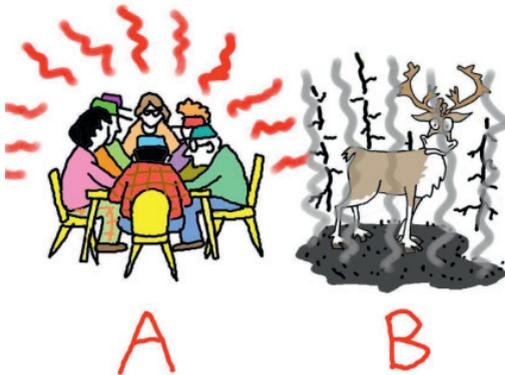
Wounding loss

For many years the Beverly and Qamanirjuaq Caribou Management Board (BQCMB) and the Porcupine Caribou Management Board (PCMB) worked very hard to improve marksmanship. At first they provided life-sized targets for people to practice on. Nowadays the targets are 11" x 17". Sometimes communities stage shooting contests using the targets. The Boards have also written much about this and I think are still producing such material.

But I asked a number of people who had been involved for many years if they thought all their work had made any real difference – that is; significantly fewer caribou were being wounded. And they all felt there probably was **little or no improvement**.

Poor hunting practices are still discussed all the time at board meetings.

The Null Hypothesis is true.



Habitat loss

Going back to the early 1980s, the BQCMB tried very hard to protect winter ranges of the Beverly herd from forest fires. Much expensive research was done, many big reports were written, many meetings held, many strong letters sent to government.

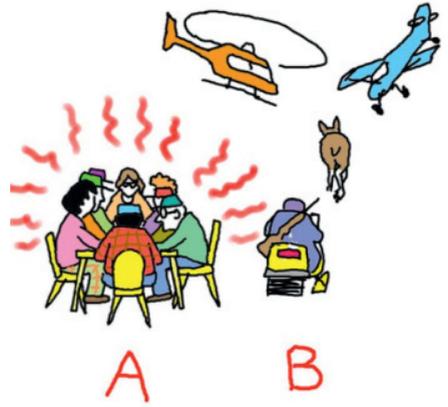
But after more than 20 years, **most of the Beverly Caribou winter range has now been burnt**. This summer was the first time that fire fighters considered the needs of these caribou – but it's too little too late.

The Null Hypothesis is true for fire and habitats.

Disturbance

Much work has also been done by the BQCMB and the PCMB on protecting caribou from hunters that chase them and from aircraft that buzz them to get pictures. We have tried posters and stickers and education programs. But, we could not afford to make this an annual campaign.

Once again, those whom I interviewed felt that little had been accomplished. When a hunter on a skidoo sees caribou he naturally tries to catch up with them. Every year new pilots are flying new tourists around and no one knows or cares about stressing caribou. And most - but not all, exploration and development companies go about their business without bothering to avoid caribou.



The Null Hypothesis is mainly true (see below).

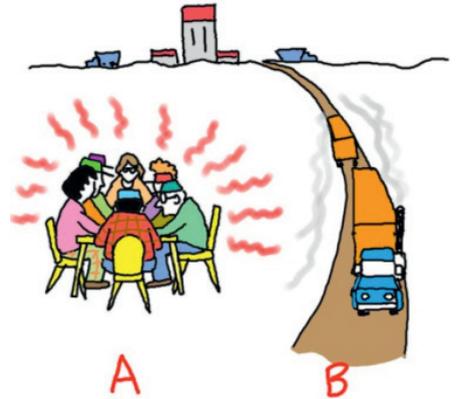
Industrial development

Co-management organizations spend a lot of time reviewing development proposals to protect caribou habitats and minimize disturbance. The people I interviewed felt that their efforts were making a difference in where and how companies did business - also that their contributions were much appreciated by regulatory authorities and communities.

Caribou habitats are in **better shape and caribou are disturbed less** by development due to co-management.

My observations do not support the Null Hypothesis.

The Null Hypothesis is false.



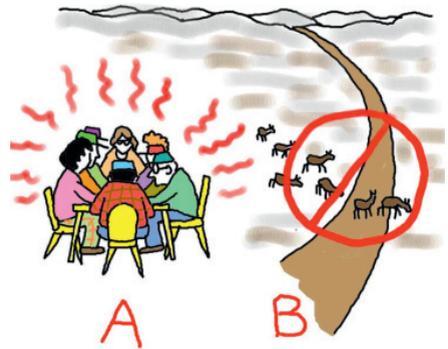
Let the leaders pass

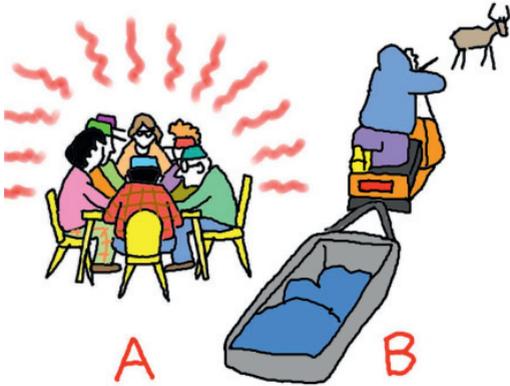
Traditional Knowledge on the Porcupine caribou range teaches that female caribou lead the migrations and maintain the collective knowledge of seasonal ranges for the herd. It is therefore traditional practice to let the first bands of caribou pass by on the fall migration in order to take the herd to its winter range. One winter range in the Blackstone Mountains of the Yukon cannot be reached except by crossing the Dempster Highway. The PCMB strongly recommended to all governments and communities that hunting near the Dempster Highway be prohibited for a week from the time the leaders first appeared in that region so they could take the herd to ranges east of the highway.

Many aboriginal hunters did not want to comply with this recommendation. The Yukon Government stopped its licensed hunters for a few years. But, when one First Nation challenged YTG's authority over aboriginal hunting on the highway, the government gave up the ban entirely and so did all the First Nations.

For the past three years there has been **no ban on hunting** when the leaders reach the highway.

The Null Hypothesis was false but now is true.



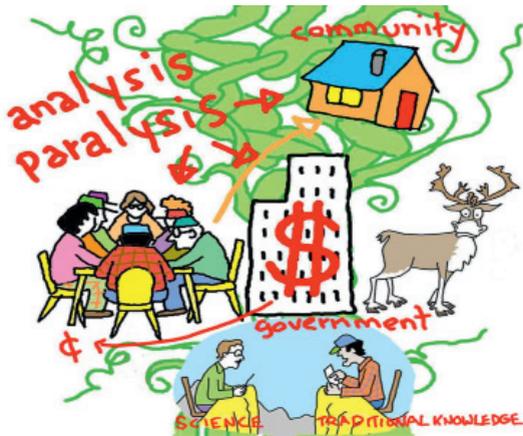


Harvesting

Since most hunters are aboriginal people, government restrictions on their harvest are rarely applied. Although there is much talk about hunting levels and bull hunting versus cow hunting, nobody pays much attention to co-management until there is a population crisis. As of fall 2010, there were reported to be at least 6 crises on the North American barren-ground ranges.

Co-management organizations were involved in the present harvest restrictions on the Bluenose West and Bluenose East herds, and their co-operation was vital to the success of the restrictions. The PCMB recently completed a harvest management plan for the Porcupine Caribou Herd and the Wek'eezhii Renewable Resources Board has approved a harvest plan for the Bathurst herd. Neither plans have been implemented yet.

Perhaps the 'Null' test is not fair for this issue. When there is a crisis the Null Hypothesis is false. But as to preventing a crisis so far, it's true.



Why is co-management so ineffective?

From the above you can see that, generally, caribou are receiving very little direct benefit from co-management. Not for lack of trying, that's for sure. Co-management organizations struggle mightily to benefit caribou on the land. But their best efforts frequently go nowhere.

Why is this so?

The bureaucratic jungle

It's a jungle out there. On one side of the jungle is co-management. On the other are the caribou. What's in the jungle that stops co-management from reaching the caribou?

1. No authority

Co-management boards have it tough. Governments don't care much for advice. They like to do things their way. Governments like co-management when it supports their programs. But when they don't like what they hear they can just hang up the phone. In theory boards legislated through land claims have more clout, but they still labour hard to be heard.



2. No money

Co-management is underfunded by governments. Getting everyone together for meetings uses up most of the money. Special projects about marksmanship, disturbance, education, etc. cannot be maintained at a high level. Often the money comes from time-limited private grants.



3. No communication

After a meeting, the local representatives are supposed to go back and inform their community. But that's difficult – the issues are too complicated and too many. Besides, co-management is there not only to inform but also to listen. If this is not clearly demonstrated then the whole thing breaks down. And finally, means of getting the message out, such as newsletters, articles, and radio bulletins are costly.



4. No follow through

We humans suffer from 'analysis paralysis'. We love to discuss things – forever. But nothing actually gets done. For instance: no government (territorial or aboriginal) will ever undertake another wolf control because they are too afraid of the international backlash. But this will not prevent endless meetings and reports about it in the future.



5. No dialogue

Despite decades of dithering about the roles of western science and traditional knowledge, the gulf between them is still vast. There is very little common ground and almost no common language. Presently there are 203 employees in the Yukon Department of the Environment. Of these 8 are of Yukon First Nation Ancestry – less than 5%. Yet First Nations make up 25% of the Yukon population. I would expect that the figures are similar in other jurisdictions especially for positions of bureaucratic authority. Western Science, as it is practiced and presented, does not work for people from traditional backgrounds.



And yet, Western Science still dominates most discussions. The big issues of 'Conservation' are mainly debated and decided by western science standards. The old joke is "I'll manage and you cooperate." When the other shoe drops, it's rarely a moccasin.



The future of co-management

Co-management is here to stay. It is a feature of every land claim settlement. And soon there will be aboriginal Self-Governments from Nunavut right across to the Yukon. Given the handicaps co-management is saddled with, what can be done to make it more effective?

More authority

Can quasi-judicial organizations be created that give more decision-making power to citizens? The Yukon Water Board (grandfathered into the Umbrella Final Agreement) and the Alaska Board of Game have such authorities.

Can existing co-management agreements be modified for aboriginal government representation rather than local membership? This would give much needed authority for opinions expressed at meetings as well as direct linkage to the recipients of the final recommendations. Another approach is to craft intergovernmental agreements that incorporate a decision-making mechanism. The Porcupine Caribou Harvest Management Plan has an Annual Harvest Meeting involving the Board and all the "Parties". The meeting determines the status of the herd and, based on that, the responsibilities of each government are already spelled out in the plan. There is less wiggle room that way.

More attention to aboriginal governments might be worthwhile. So far the focus of co-management has been the territorial and federal governments. In the Yukon there are 12 self-governing First Nations. But they rarely get recommendations from the Renewable Resources Councils or the Fish and Wildlife Management Board. Aboriginal governments may be better suited to some forms of management on the land, such as habitat protection, wolf control, and harvesting protocols. They should be expected to participate just like every other government.

Failing any of these measures, in the absence of real power the only alternative is to *lobby hard*. Arrange meetings with government officials – as highly placed as possible. Utilize the media and schools to get strong public support. Recommendations alone carry little weight. In the jungle you have to hustle to get anything done.



More money

Getting financial increases from government is always frustrating. Some budgets are frozen for decades. Existing funds barely cover the cost of meetings with nothing left to make things happen. Many co-management organizations turn to private foundations for support. It is also possible to partner with governments, industry and NGOs. A skilled proposal writer can find weird funds you never heard of.



Better communication

Meeting summaries should be sent to all appropriate governments and stakeholders. Expecting a local representative to go back home and explain everything is unrealistic. Where possible, employ all media to let people know what is going on: radio bulletins and interviews, newspaper articles, website, youtube, school presentations – blanket coverage wherever possible. All such material should show how community information and opinions were factored into the outcomes.



Be your own critic

It's easy to blame others for why things don't get done. So take a hard look at what you are doing. Is your time spent wisely? What have you really accomplished? Do an internal audit of your own effectiveness. Buckets of time can be wasted on internal procedures, government briefings, revisiting the same old issues.



Find something that could really help caribou on the land and focus on that, rather than fretting over everything and accomplishing nothing. It could be protecting a local habitat, getting young people out hunting and doing it properly, reducing the cow harvest. Set yourself the goal of accomplishing that one thing and see if you can do it.

Bridging the science/TK divide

Co-management has a foot in both camps and therefore is in the best position to create ways for scientists and the communities to have meaningful discussions. Some pioneering in this field has been done by the the Selkirk First Nation in the Yukon. Working with industry, SFN prepared a list of geological exploration terms in Northern Tutchone. It also has its own 'Consultation Protocol' based on traditional principles that spells out each step (and style) for engaging with the community. It hosts an annual 'May Gathering' taken from traditional practice where three First Nations pool their harvest data and knowledge of the



land to determine management actions for the coming year. The YTG regional biologist is a welcome participant.

If you are looking for something to sink your teeth into this may be one of the most worthwhile areas for co-management attention. Getting people together is one thing – having them understand and respect each other is something else. It may not directly affect caribou but greater cooperation and less friction in the future is bound to have some benefits on the land.

Well, the past 25 years looks pretty bleak. Hopefully, greater aboriginal involvement through new boards and new governments will improve matters. But the status quo is a tough barrier to break through. As an aging veteran of co-management, all I can say is:

1. fight the good fight,
2. never be satisfied with your own performance,
3. don't be afraid of government,
4. and always, always, remember the caribou.

