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Chair

Mr. Pat O'Brien

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• (0905)

[English]

The Chair (Mr. Pat O'Brien (London—Fanshawe, Lib.)): I would like to call to order meeting number 19 of the House of Commons Standing Committee on National Defence and Veterans Affairs.

There are two parts to today's meeting, colleagues: first, we have a witness, Professor Martin Shadwick, and then there is some brief but important committee business to deal with.

Today we are continuing the committee's work on the procurement of the four submarines from the government of the U.K., which is related to the unfortunate accident on the *Chicoutimi*.

I'd like to welcome Mr. Lapierre from the Bloc, who is substituting today. *Bienvenu*.

Professor Shadwick, welcome. The floor is yours.

Professor Martin Shadwick (As Individual): Thank you, Mr. Chairman.

I very much appreciate the opportunity to offer some thoughts on the place of the submarine in Canadian defence policy. Naturally, I very much regret the circumstances that prompted this, given the incident on the *Chicoutimi* late last year.

I'd like to keep my opening comments as precise as possible, or at least as precise as possible for an academic, because we have been trained at great expense to only know how to talk in installments of 15 minutes. So I will make a heroic attempt not to get anywhere near 15 minutes. I'm also cognizant of the fact that you've already heard a good deal of testimony. I'll try to avoid duplicating and overlapping that wherever possible.

There are a number of areas where I would like to focus my attention: first, historically, the place of the submarine in Canadian defence policy and Canadian maritime doctrine; second, the circumstances surrounding the acquisition of the Upholder class in the previous decade; third, the broader rationale for the place of submarines within Canada's naval force structure; fourth, a number of niche issues, which perhaps would be of interest to the committee, related to project management issues, the question of spare parts for the submarines and so on; and fifth, speculation as to where we may now be going because the road map may well wind up changing somewhat, given the incident on the *Chicoutimi*.

You will have noted, of course, that historically, in a Canadian context, submarines have played a relatively minor role within the navy. Even during the Cold War, the submarine service was very tiny

by the standards of the rest of the navy. The selection of the Oberon class back in the 1960s, I would suggest to you, was actually a very sound and cost-effective decision. If you could fault our earlier naval procurement trends, it was perhaps that we only bought three of the Oberons and that a fleet of four or five at that time, in the 1960s, might have made more sense. It would have provided sufficient submarines to divide the fleet between the east and west coasts, thereby eliminating the need to borrow or purchase second-hand American submarines, as we did on the west coast for some years. Also, with a larger fleet, it would have made it much easier to use the submarines for more than anti-submarine training purposes, sparring partners for service ships and aircraft, and to give the small fleet an operational role as well as a training role.

Turning to more recent times, you're well aware, of course, of the developments on the submarine front in the 1980s. We gradually modernized the Oberon-class boats and moved them rather subtly into an operational role, to join the training role that had pre-existed. There was debate in the academic community and indeed at the political level in the 1980s as to the place of the submarine in the Canadian force structure. I think the most striking recommendation from that time period came from the Senate subcommittee on defence in 1983, which urged that Canada acquire 17 additional diesel-electric submarines. So, clearly, the Senate defence committee of that day saw a very significant role for submarines. Expanding from three to at least 17 more would be quite radical.

What we got instead, of course, was the 1987 white paper on defence, which replaced the plan that had pre-existed to acquire from four to 12 conventionally powered submarines, with a fleet of 10 to 12 nuclear-powered submarines. The white paper's plan to develop a three-ocean navy built around 10 to 12 nuclear-powered submarines was bold, even visionary, in concept, but I must admit that my enthusiasm for that project at that time was decidedly restrained. My concern with that proposal in 1987 was that the cost would be well beyond what the government of the day was projecting. It would not have been cost-neutral by any means. In addition, once you use the "n" word, once "nuclear" gets in there, we were already seeing a strong public backlash against that program, and my fear, in addition to the financial side, was that the nuclear submarines would become a lightning rod for opposition to other defence policy initiatives that were quite sound.

So when the nuclear submarine program died in the April 1989 budget, I must confess to being ambivalent, perhaps even pleased in a sense, because I did not really see that project made financial sense or sense in other ways. It was bold, it was visionary, but perhaps a little too bold and too visionary in that sense.

The government of the day I think had some difficulties selling the nuclear submarine program. I'm sure the public was never quite sure exactly what the *raison d'être* of that submarine fleet was.

If you go back and look at press reports from that time, I suspect the impression that was left with the public was that we were going to buy those nuclear submarines for the purpose of checking passports at the entrance to the Northwest Passage. Even the most ardent Arctic sovereigntist would have some difficulty with that type of expenditure for that particular purpose.

That leads, of course, to the post-Cold War environment and the Mulroney plan to buy a fleet of up to six conventionally powered submarines. That idea of looking at conventionally powered submarines did of course make its way into the 1994 white paper on defence, which had a very interesting although cryptic section on submarines and took note of the special joint committee's findings of the year before, in 1993, which basically said that submarines were desirable and perhaps worth having, but it came down to a financial equation. Were they affordable? Was there a cost-effective manner to find the money within the defence envelope to pay for modern diesel-electric submarines, a qualified support hinging on cost? Of course the 1994 white paper did mention the Upholder class by name.

In terms of the decision to look at submarines, circa 1994, 1995, 1996, it's clear that a number of issues were perhaps more compelling and some were less compelling to the government. One, of course, was that the acquisition of submarines would be consistent with the multi-purpose, combat-capable mantra of the 1994 white paper, in very broad terms seeking to maintain as much multi-purpose capability within the navy as possible. This tied in, on a lower level, with the navy's view that one needed a balanced fleet and that submarines were a logical and integral component of a balanced fleet including frigates, destroyers, supply ships, and so on.

There were, in addition, a number of other arguments that were made, both in the academic community and of course from the navy, that submarines were still crucial for the anti-submarine warfare training role and that our allies were interested in us having that capability. Certainly the Americans had made it known they were interested in having fairly ready access to conventionally powered submarines for their training purposes because they of course had long since gotten out of the business of operating conventionally powered submarines.

There were additional arguments in favour of submarines. The operating costs tend to be somewhat lower. There's a special overhead, an infrastructure necessary to support submarines, but on the other hand, they are crew-sized and the complement is a fraction of what is necessary for a frigate or destroyer. You do not have to buy a helicopter for them, for obvious good reasons. You don't have air defence weaponry on them. So submarines, in a sense, can be viewed as a cost-effective, relatively low-cost type of acquisition.

There was also the argument that the submarines, in addition to their war-fighting capabilities, their stealthiness, their covert nature of operation, were also not bad platforms for sovereignty surveillance, with the ability to monitor Canadian territorial waters and waters of interest at an economical price. There was also the potential for perhaps using them in a constabulary function for

missions like fishery surveillance and counter-narcotics work as well. There were, in addition to that, the potential overseas roles for submarines in support of UN sanction monitoring, peace support operations, etc. This was a fairly lengthy shopping list, and the question that we can pursue perhaps in the question period was the degree to which each of these arguments was in fact credible. Some were perhaps more persuasive than others.

● (0910)

If you look at the sense of the Upholder class itself and put aside the general rationale for having submarines in the Canadian navy, the tilt towards the Upholder class acquisition from the British I think came down to a couple of factors. One, of course, was cost. They were available at what seemed to be a very attractive price, maybe not as attractive as it will turn out in the end, but attractive at the time. Secondly, they were modern. They were of recent origin. They were reasonably well equipped.

I came across one very interesting quote from a senior British naval architect writing later in the 1990s, after we had decided to acquire them, who compared the Upholder class weapon and sensor package very favourably to that found on the Royal Navy's Trafalgar-class nuclear-powered submarines, actually to the point where he says, "The weapon and sensor fit of the Upholders is more advanced and more expensive than that found on a Trafalgar-class submarine."

They were available at an attractive price, it seemed. They were modern, well equipped. They were little-used. There was very low mileage on these submarines, which of course in a way was a two-edged sword, because there were unknowns that even the Royal Navy I'm sure were not fully conversant with at the time they were parked.

There were some other more subtle factors that get lost, I think, sometimes in the shuffle. One was the British origin of the submarines. That was an attractive sales feature from a Canadian naval perspective, in that our existing submarines were British. The idea of going back to the U.K. for submarines meant that, at least in theory, it would be easier to assimilate the technologies faster into our own navy, because our people were familiar with British technique on submarine design and construction, and that if we had switched to a German or Swedish or French boat, the learning curve would have been somewhat greater. So that was another plus, if you will.

There was one other thing that was politically attractive, I'm sure, to the government of the day when it looked at the pros and cons of submarines, and that was the fact that the submarines had already been built. These were pre-existing submarines. What that meant was, in theory, fast delivery, although that turned out to be rather optimistic. But since they were already built, it avoided getting into the political landmines of having to pick a foreign design and then decide whether one wanted to build them or assemble them in a Canadian shipyard.

When they were already built, that troublesome set of issues did not get onto the radar screen. A whole plethora of political and financial and regional development issues never came up, because the government could quite rightly say these submarines have been built already and we don't have to worry about construction in a St. Lawrence shipyard or in the Maritimes. It was a non-starter. I would think politically that was attractive.

On the downside, with the Upholders in particular, there were of course the teething problems. It might be very generous to call them teething problems at that time. These were not unknown to the navy, certainly. HMS *Upholder* herself, which of course became *Chicoutimi* later, had a rather long ordeal getting her torpedo problems straightened away. These difficulties, or at least a large chunk of them, were known.

On the downside of the Upholders, another point that I'll mention quickly and then move on was that they were always going to be orphan submarines. These were going to be the only four Upholder-class submarines ever built, because the Royal Navy in the post-Cold War peace dividend era had cancelled its plan to acquire a second and larger batch of Upholder submarines. Those disappeared off the radar screen. The potential for further exports of the Upholder class was effectively zero. These would be the only four in the world, which meant that any problems they encountered would be basically unique to whoever had those four submarines, including issues of spare parts and life cycle support, which we can perhaps return to later.

If I summarize for you very quickly the academic attitude circa 1993, 1994, 1995, I think what I find striking in retrospect was that you certainly could find academics who, very similar to the naval perspective, thought it was crucial to have the submarines. Equally, there were academics who thought this was a non-starter—we could not afford this, could not justify having submarines in the navy and something had to go. But as near as I can tell, the broader consensus within the academic community was more ambivalent, effectively that submarines were nice to have and were desirable but not necessarily crucial for the survival of a credible Canadian maritime capability.

• (0915)

The thing that tipped people from the ambivalent stage towards saying okay, let's acquire the submarines was in the end the financial aspect of this, that it seemed like a marvellous opportunity to get four low-mileage, modern submarines at what seemed like a ridiculously low price. That moved more than a few people in the academic community from a certain ambivalence about submarines to saying that at that price the point became credible. The rationale might have been a bit suspect if it had been a question of a multi-billion-dollar expenditure for brand-new submarines, but the low-cost price point tipped it over.

And one gets the impression of course that this was the attitude within government and cabinet as well. It's very difficult in retrospect to imagine the Chrétien government approving a multi-billion-dollar submarine acquisition program in that timeframe, but the prospect of getting four submarines of good performance at a very attractive price tipped that over, so price really becomes crucial in this equation.

At that juncture—and this was at the time the navy was busily promoting the acquisition of the submarines and so on—we ran into a number of interconnected difficulties. First of all, there was the amount of time it took between the 1994 white paper broaching the idea of submarines and the Chrétien government's actually deciding yes, we will go ahead and acquire them. There was a long lead time in there. While that was being considered and debated within government, these submarines were of course aging, and questions about the degree to which they had been properly stored become more important.

Let me put it this way. Modern warships are difficult things to store for any length of time. There's a deterioration that happens on board in terms of electronics and many other systems. Submarines are perhaps even more vulnerable to that problem than would be a surface ship, say a frigate or a destroyer. So while we were debating the issue internally, these submarines were aging, decaying to some extent, because they had been parked.

Now, part of that fault, then, is on our side. We took a long time to make the decision to acquire them. To what degree one can criticize the British for perhaps not preserving these submarines in a better state, if you will, mothballing them or cocooning them in some way, is certainly something well worth pondering. It may well be, with respect to the British, that they expected that a new buyer would be found very quickly for those submarines and therefore were naturally somewhat reluctant to go the extra mile at preserving or mothballing these submarines in an acceptable state. If they had known in advance how long it would take to find a customer for them, they may well have taken somewhat greater precautions to preserve the physical condition of those submarines.

So we perhaps surprised them. Perhaps they were looking for a place to economize. Whatever it was, the process of putting them aside in good order does raise some obvious questions.

We can come back perhaps later too to the degree to which we were aware of the technical issues on the submarines in terms of modifications, the Canadianization process, and simply refurbishing them and getting them back into a safe-to-go-to-sea situation.

Finally, I just have a couple of quick observations to give you some idea of the intellectual or ideological level I'm approaching the submarines on. Let's look at submarines in a present-day context as to whether we should in fact have acquired the Upholders or should seek to ensure they stay in the fleet. It seems to me, because of the *Chicoutimi* problem and other problems with the submarine, it's not unreasonable to imagine that the current international policy review might be looking at, amongst other things, the future of the submarine service. Obviously, it would be politically very difficult to jettison the submarine force at this point, but I wouldn't say it's impossible that such a decision could be made. Priorities will shift, the submarine may seem less relevant in today's context, and if there are underlying questions about the Upholders, one can imagine a Canadian government saying we're going to cut our losses at this point and perhaps get out of the submarine business.

In response to that, I'd say my basic view on submarines is that they certainly remain a desirable capability within Canada's armed forces and the navy itself. The question, of course, is how convincing that is. Is it a question of the submarines being highly desirable but not crucial?

● (0920)

That's where I think the real debate is. Most people are prepared to admit that they have value. It's a question of how much is it worth paying to get that value. Is it an overwhelmingly convincing case that can be made, or one that's again the idea that they're nice to have but are dispensable if other fundamental defence priorities are judged of greater significance.

In terms of that, I think one of the reasons I'm at least somewhat sympathetic to the idea of keeping submarines in the fleet has to do with the notion in the 1994 white paper on defence about a multi-purpose, combat-capable military. I'm a bit wary of the niche models of defence organization—in other words, winnowing the capability skill sets within the armed forces down to a very tiny selection of bureaucratic winners, if you will, and everything else gets jettisoned. My fear simply is the loss of flexibility that develops when you get rid of large numbers of capabilities and favour a handful of others in your defence-making process.

The basic problem or difficulty with the niche model, the idea that within the navy we have only frigates and supply ships, that type of view—and there are air force and army analogues to it—is that it's impossible to predict with certainty the geostrategic environment of the next five, ten, or twenty years. There's no guarantee we're going to get it right, so there's every possibility that we could get the formulation wrong and choose to get rid of capabilities that may turn out to be needed later. But there's also the other side of the coin.

Because I don't think anyone who would be sitting here could fearlessly predict the geostrategic environment, my preference—and maybe it's just an inherent cautiousness in terms of strategic planning—is to try to retain as many skill sets, capabilities, and equipment types within the forces as we reasonably can be expected to afford.

Obviously, we cannot afford everything; hard choices have to be made. I'm sure the international policy review is grappling with exactly that set of issues. But as a basic point, I think there is a certain case to be made for retaining submarines amongst that mix. It's easy to regard that as bureaucratic politics, that just because one's always had tanks in the army, they always must have tanks, or the navy has had submarines for forty years, etc.

Finally, just to throw out very quickly some issues for later questioning or things you could mull over in the drafting of the report, there's the question of the degree of utility of submarines in constabulary missions. Putting aside sovereignty, security, and monitoring Canadian waters, roles perhaps in support of the UN and international activities, the fisheries protection types of roles, and things like counter-narcotics are worthy of a close look.

There's sometimes a tendency to regard those as make-weights that have been dreamed up by the navy as a further rationale for keeping submarines. That may well be the case at times. A navy that wants to keep its submarines is naturally going to be looking for as many rationales as possible. But I think it's well worth a very close

look to see how credible the submarine is in a constabulary type of operating environment, at what capabilities it brings that we may be missing in other areas.

I'll leave the question of the air independent propulsion option for the submarines for the question-and-answer. That was something that potentially would have been a powerful argument for submarines, but the Upholders are now going to be so old by the time we get them into full service that the enthusiasm for cutting them open again to put in an air independent propulsion system so they can operate in the Arctic is going to be extraordinarily limited, I would suspect. These submarines, assuming we get all four in service, are indeed aging.

● (0925)

The Chair: Professor, I hesitate to interject, but I'm going to have to. We have a bunch of anxious people waiting to ask you questions, so can I ask you to come to the conclusion of your remarks?

Prof. Martin Shadwick: Indeed.

Very quickly, I would conclude on the note that I still come back, in part, to this question of the relative importance of the submarine. Can we hold them in the highly desirable category, or do we move them into the essential category, such that we must preserve this capability? I certainly would tilt toward highly desirable. Essentially, I think it's going to come down to a question of trade-offs. What can submarines actually bring to the table? Because we had used the Oberon class more or less as training assets, and because we haven't been able to get the Upholders at sea in any significant way, I would submit that to some extent the navy itself is not totally sure of just how useful these submarines are going to be in the post-Cold War defence environment, because we've now gone basically the better part of a decade without a submarine service. Maybe that partly answers our question, I do not know. But I think the trade-offs are the key issue.

Thank you.

The Chair: Thank you very much for that interesting overview of the whole submarine issue and rationale, and so on. That's certainly a major part of our study.

We'll now start our first round of questions—seven minutes, please—with Mr. Casson.

Mr. Rick Casson (Lethbridge, CPC): Thank you, Professor, for the interesting thoughts you brought forward today on everything from the rationale, to the need, to the continued need, I guess.

It's pointed out in your biography that you did a study on the relationship between the military, quasi-military, and non-military roles of the Canadian Forces. While you were doing that, did you look at the relationship between the military and non-military aspect of our national defence system, between the bureaucracy, the politicians, and the military?

I ask this question because the length of time it takes to procure equipment for our armed forces is unbelievably long, and everybody agrees it's too long. Certainly this submarine procurement has taken too long, when you go back to the initial contacts that were made even pre-1994, and here we are, over ten years later, and we still don't have our submarines in full operation.

Have you, in your studies, come up with any theories or put out any papers on that relationship, between the military and non-military aspect of our defence system and how it all binds together and how it doesn't bind together, how it works well and doesn't? Are there things that we as a committee can look at to make recommendations to the government to speed up this process of procurement?

• (0930)

Prof. Martin Shadwick: There is, to some extent, data in the studies I've done dealing with procurement processes. The interest in the non-military, quasi-military, and military functions of the forces in my academic work has been basically confined to roles such as search and rescue, disaster relief, fishery surveillance, and so on and so forth. So it dealt more with interaction amongst departments: do you privatize certain functions, do you keep them within other government departments or give them to the military, that type of thing. But there has been some spillover into procurement issues with the submarine, because one of the arguments the navy did use initially was that the submarine did have a role to play in constabulary-type missions.

We did see testing, of course, as the committee is well aware, in the 1990s, a few trips with the Oberon class in fisheries-type missions. We didn't do enough of it to gather perhaps as much data as we really need, although I must say, having looked over the radio transcripts from one of the times we used an O-boat for fisheries protection, it warmed the heart of a Canadian nationalist. The transcript was most enjoyable to read, because they had logged the transmissions in the American fishing fleet.

After they had gotten on the radio and told them that they were under observation by a Canadian submarine, the comments from the fishing captains were fascinating. They were first dumbstruck by the idea that Canada had a submarine, and secondly that it was actually observing them through its periscope at that time and communicating with them on the radio. The American ships scattered in all directions as soon as they found out they were under observation.

So that's one reason I hesitate to dismiss the constabulary function out of hand. There might be something to that. Whether we need any modifications to the Upholder class to better perform the constabulary functions is something we could perhaps look at. The navy's view, I think, is that the Upholders, as delivered, will have the requisite improvements over the Oberon class to be more effective in the constabulary mission. That may or may not be quite the case.

In terms of procurement, though, more specifically, you're quite right; everyone agrees that the current system is far too time-consuming. We even have managed to find a way in this country, in addition to turning procurement into a spectator sport, to take forever to make even simple procurement decisions.

The Upholder class is a nice example in its own right. This was an off-the-shelf item. In theory, this should have been a very neat and tidy procurement. Yet for a variety of reasons, partly political, partly technical, partly financial, we've even managed to turn off-the-shelf pre-manufactured buys into a long-running saga.

Even regarding simple equipment such as the Gelaendewagen, the replacement for Iltis jeep vehicle, this is not rocket science technology we're talking about here. Any self-respecting yuppie

has a pretty good idea how long it takes to buy what is essentially a sport utility vehicle, yet here we are. Look at the length of time it took to get the Iltis replacement into service. At that rate, if we had gone looking for a new jeep in September 1939, we would still not have taken delivery of them by VE Day. That's not terribly impressive.

On the minutia of procurement, there are people better qualified than I to look at where we can economize, where the changes can be made. Sadly, it seems in many cases we concluded that the quickest way to speed up procurement in this country is not to buy anything at all. That saves a lot of time. You don't have to worry at all.

A large part of it, though, I think is the internal machinations within DND of getting the requirements and the specifications; the lack of strategic direction from government as a whole as to what makes sense at one point, and then that changes three years later, that sort of thing; and the involvement, of course, of many, many stakeholders in procurement, other government departments that have a seat at the table, that are involved in the policy process.

Of course, the classic example is an old one, but I think it's still quite revealing. If recollection serves, when we bought the CF-18 fighter aircraft, at the time of that competition, it was calculated—by whom remains unknown—that fully three-quarters of the data that we released to the manufacturers to put their bids together related to industrial benefits, offsets, job creation, technology transfer, and so on, within Canada. Only one-quarter of the specifications that they were given related to the military requirement for the new fighter aircraft and what we expected it to be capable of in operational and technological terms. I think right there, in a nutshell, is the problem. We've overly politicized this.

• (0935)

You can never take politics and politicization out of defence procurement. Constitutionally, in a sense, you can't do that. The decision-making is not by the military; it's by the political leadership. But we've pushed this further perhaps than most countries, although I would add simply in closing that our record compared to some countries isn't always as bad as we think. Some of our allies have had real difficulties with the same thing.

When the Belgians purchase military hardware, there is division between the north and south over who gets what industrial benefits. So there are things that we do that other countries can certainly relate to.

But at a time when our defence dollars are even more tightly rationed, the fact that we take a decade, a decade and a half, to purchase very simple equipment is cause for sheer disbelief, if nothing else.

The Chair: Mr. Casson, it's seven minutes, question and answer. If you have several questions, you'll have to keep them succinct, and we'll ask the witness to do the same with the answers. But if you want to ask an open-ended one, we can go that way.

Anyway, that's interesting. You mentioned the constabulary function of submarines. We're lucky to have a retired police chief. I don't know if Mr. MacKenzie wants to come out of retirement to take his training as submariner and help out on that or not. But that's an interesting point you make, Professor.

[*Translation*]

You now have the floor, Mr. Bachand.

Mr. Claude Bachand (Saint-Jean, BQ): Thank you, Mr. Chairman.

[*English*]

Can you understand French?

Prof. Martin Shadwick: No.

[*Translation*]

Mr. Claude Bachand: Mr. Chairman, we're pleased to welcome a chief of police, but I think we need to hear from some mechanics on the subject of submarines. Their expertise would prove quite useful, perhaps more so than that of a police chief, with all due respect to Dave MacKenzie.

I very much appreciated your presentation, Professor Shadwick. You've made a major contribution to this committee. I'm somewhat envious of your status as an academic which, my translator friends inform me, is the English equivalent of "grand chercheur" or "universitaire".

However, you have to understand that our job as MPs is to defend taxpayers. We have to look at each situation and ask ourselves if the taxpayers have received or will receive lasting value for their money. That must be our overriding consideration. Therefore, I greatly appreciated your concern for critical, priority matters in this climate of financial restraint.

You also made a reference to the 1994 policy. You stated that at the time, academics seemed to be favourable to this decision, but nothing more. Things have changed, however. We're calling for a new defence policy to replace one that was drafted over a decade ago.

There's no question in my mind that the Canadian Navy wants to retain submarines in its structure. Spokespersons for the Navy have appeared before the committee and have stressed how important it is to retain this capability, for two reasons. You've mentioned one of these reasons, namely patrol capability patrols, that is the ability to patrol the coasts, to monitor trafficking and so forth. These submarines are apparently quite stealthy and can approach to within 50 metres of a vessel to take photographs.

I've countered this argument by pointing out that UAVs, or unmanned aerial vehicles, can carry out the same type of surveillance operations for substantially less money. If we have good reason to believe that a vessel entering our waters is about to engage in some trafficking activities, UAVs can detect that vessel's presence and a frigate can be dispatched. However, there is no

guarantee that when the vessel entered our waters, a submarine would be in the immediate vicinity. Therefore, it terms of coastal patrols and drug trafficking surveillance, with today's technology, UAVs could, in my opinion, do the job for less money.

Another argument that's been raised often is that submarines ensure Canadian sovereignty. You've avoided any mention of the air-independent propulsion system. You have to agree with me that installing this type of system would be an extremely costly proposition, somewhere in the order of \$150 million per submarine. That's a major concern. Sovereignty and visibility go hand in hand. The Navy can't tell me that Canadian sovereignty, particular in the Canadian Arctic, is protected by virtue of the fact that we own submarines. It's important to dispatch frigates and manpower to show that the Arctic belongs to Canada.

If you were called upon to help draft the new, eagerly awaited National Defence policy, what would you suggest the government do as far as the submarine incident is concerned?

• (0940)

[*English*]

Prof. Martin Shadwick: Thank you.

There were some fascinating questions in there.

If all objective analysis suggests we can get these submarines into service at a credible capability at a credible price—I'm going to duck defining what "credible" is, because it's very difficult to know at this point—then I think my inclination would be to hang on to them.

It may be that the *Upholder* herself may never get back into service. We don't know the full details of the fire damage and so on. Someone might make a policy choice that we'll have to delete it from the package and concentrate on the other three, with *Upholder* becoming a training vessel alongside, that type of thing. I think that would be my basic tilt, but as you see, I come back to the financial side here, that if it's affordable, then I would tend to vote to keep this capability.

I quite agree with you, though. On the sovereignty surveillance front there are other technological options we did not have even 10 or 15 years ago, such as UAVs. Surface wave radar comes to mind as another possibility.

There's also the question of trade-offs. For example, if one's looking at coastal patrol and surveillance—and certain people in the submarine service will be pleased with my bringing this point up—one could objectively try to look at which sovereignty surveillance platform is more useful. Is it to preserve, say, three or four of the submarines, or is it to park them, to eliminate them, and put the money into UAVs or the aircraft fleet?

As you know, we're in the process of making a significant reduction in the number of military coastal patrol aircraft. Now, some might argue that if we get rid of the submarines, we'll have enough money to modernize and retain all of the Aurora and Arcturus aircraft. So there's a cost-benefit analysis right there in submarines versus aircraft, although admittedly it's mixing apples and oranges to some extent.

There are sovereignty issues I didn't mention where the submarine has some unique advantages. Of course, one that surfaces—no pun intended—is in the sense that from time to time, if we have submarines, it does require the United States to share certain data with us in terms of water space management. If we add more coastal patrol aircraft, we don't get the same effect. They don't have to tell us where theirs are so much and we don't have to tell them where ours are, whereas if we have a submarine capability, they do have to share certain data with us, and that makes an indirect contribution to the protection of Canadian sovereignty and security.

You mentioned visibility, which is another interesting one in the context of submarines and their applicability in a coastal patrol type of mission. Here you get interesting debates in the literature. You can argue that if you're in the business of enforcing or demonstrating sovereignty, you want to be as visible as you possibly can. You want the frigate or the fisheries patrol vessel or aircraft to be visible. The markings are there, it's clear who owns it, etc., and you have the deterrent effect that goes with that.

That of course collides with the reality of the submarine business. The virtue of the submarine is non-visibility, its covert stealthiness, and it's not exactly the best platform for us to try to show the flag if we're cruising along on the surface of the water, because it's going to be very close to invisible anyway. You don't have a helicopter. Your ability to board a vessel from a submarine is at best restrained, and I'm being extraordinarily generous there. It's virtually impossible in any sort of sea state.

On the other hand, though, that covertness of the submarine can on occasion be valuable in showing the flag in sovereignty enforcement mode. The parties you're trying to keep an eye on can't get much in the way of advance notice that in fact there might be a submarine observing them, whereas with aircraft or surface ships it's a little easier for the parties you're trying to observe to know you're there or are approaching. Sometimes that's exactly what you want them to know in order to deter them through presence. With a submarine you may well get the deterrence effect through covertness, and that basic stealthiness of the submarine—which was designed into submarines for war-fighting purposes, admittedly, and not for patrolling fishing zones—can be useful. It's difficult to quantify how useful.

● (0945)

The Chair: Thank you, Monsieur Bachand.

Mr. Blaikie, please, for seven minutes.

Hon. Bill Blaikie (Elmwood—Transcona, NDP): I just was thinking about your comment about the CF-18. Sometimes these procurement decisions can change the future of a country, the CF-18 decision being arguably the genesis of a lot of the political dynamics that went into the Reform Party after 1986.

One of the ideas I've heard recently in terms of the constabulary function—we'll just stick to that for a minute—is about our beefing up and arming to some degree or putting navy personnel on coast guard ships. Have you given any thought to this in your studies? What's the state of that debate? There are people in the academic community who are suggesting that and I wonder how you see that.

Prof. Martin Shadwick: Thank you. It's an area I have spent a great deal of study on, and apparently it produces grey hair at an exceptionally fast pace.

We've been through this, of course, as a country on many occasions studying the rationalization of fleets—who does what and so on. I think looking at this today that I'd tend to tilt in the direction that we might wish to consider having the navy pick up an increasing share of the fisheries surveillance business, certainly in the offshore, not so much the inshore. This runs counter to the trend line, I suppose, in recent times in Canada. The Senate has been boosting the idea of a super coast guard and expanding the coast guard's mandate rather than expanding the navy's mandate.

I'm more intrigued with the idea of what the navy might be able to do. I was heartened to find the navy now talking publicly about acquiring up to ten, in effect, offshore patrol vessels or corvettes of some sort, which would have, among other missions, the fisheries surveillance role. At the moment the navy isn't terribly well prepared for it. The frigates are overkill in some respects—I stress some—and the small maritime coastal defence vessels are rather small. They can't operate in higher seas. The idea of the navy getting a corvette fleet I find rather intriguing, and I would regard very much with an open mind the idea of the navy taking on an expanded role.

I find fascinating the view that we should expand the coast guard and in effect militarize our coast guard. This is actually going the American route, because that's how their coast guard is structured. The example in other countries frequently, not always, is to use the navy as the preferred agency. If you look at the British experience, the French experience to some extent, the Australian, and the New Zealanders, they're tilting toward using the navy more for fisheries patrol, counter-narcotics—that type of thing.

I find that a rather more compelling argument than beefing up the coast guard. You'd still have a substantial coast guard left in Canada, because you have the ice-breaking role, inshore fisheries patrols, aids to navigation work, etc. You'd still have a substantial civilian coast guard agency, but could perhaps take the longer-range offshore patrols and assign them to an appropriate type of naval vessel. I think it's well worth looking at.

● (0950)

Hon. Bill Blaikie: In terms of the Upholder class or Victoria class, they can't go under the ice, but I wonder if they would still provide some useful function in terms of northern sovereignty by just operating at either end of the Northwest Passage. Is that a reasonable conclusion?

Prof. Martin Shadwick: Yes, I think so. It would be basically, as you said, at the ends of it and in a benign environment.

It would have been nice to have me talking today about submarines with an air-independent propulsion capability. These submarines are now entering service in foreign navies. Even if we had the Upholders in service tomorrow, we're behind the curve a little. The appeal of air-independent propulsion for other countries usually has nothing to do with ice. It simply means that the combat capability of a submarine, even in tropical waters, is much greater with air-independent propulsion. In the Canadian context the ability to operate to some extent in the north, and perhaps even a little farther in than the ends of the Northwest Passage, to my mind was an added sales feature ten years ago when we were considering submarines. The problem now I fear though is that it's academic. There's not going to be either the money or the inclination to do this to the Upholders.

Hon. Bill Blaikie: What's the ballpark cost of an air-independent propulsion submarine? Who's making them?

Prof. Martin Shadwick: The Swedes, the Germans, and the French all have products on offer that use air-independent propulsion. The cost estimates would be tending toward the billion dollar per unit cost for a submarine so equipped, depending upon which technology, whether it's fuel cell or one of the other options. These types of submarines are now getting into service. The numbers are still quite modest, but that seems to be the trend line in diesel-electric propulsion. The pure diesel-electric days are probably numbered in a strict sense, and the new model is the hybrid where you have fuel cells and so on to go with it.

Hon. Bill Blaikie: Do you have any suggestions for us as to how to depoliticize the procurement process? Depoliticizing the politicians who make the decision would be a good idea, but short of a cultural revolution, do you have any mechanism or procedures you might recommend that would help in that direction?

Your point about if we'd have ordered equipment in 1939 we wouldn't have had it by VE Day has occurred to me many times, and it's embarrassing as a country to be that kind of country. We weren't that kind of country in 1939, obviously, so something has happened. I wonder if you have any suggestions on how we could get back to an earlier state.

Prof. Martin Shadwick: I suppose if I go back to first principles, the underlying problem perhaps in a Canadian context is that we don't have a strategic culture of the country, not simply as politicians, but as Canadians, as writers. We tend often to not worry about or think about the strategic rationales for the military, the need to make prompt, efficient decisions on what we're going to buy, and instead we turn them into job creation projects of one sort or another.

If the country was a little more seized of the importance of these issues.... You can't let certain decisions languish for a decade or more because you have men and women, particularly in the post-Cold War era, who are putting their lives on the line on a daily basis, and it's nice if they have the appropriate helmets and protective gear and jeeps, etc. Because as a country we've often tended to tune out thinking about these sorts of things, or at least in a way that required a quick decision or a reasonably quick decision, that's one of the biggest problems. It's also the toughest thing to fix, because in a sense we're also very proud of the fact that our strategic culture is that we don't have a strategic culture. We don't look at things through an American-type lens and we're very proud of our peacekeeping

reputation, etc. Unfortunately that's all very well and good, but we need leadership, and this applies across the board.

Hon. Bill Blaikie: Even the peacekeepers need helmets.

Prof. Martin Shadwick: Exactly, and we tend to lose track of that.

The Chair: Thank you very much, Mr. Blaikie.

I would just like members to recall this, because we're talking about procurement.

Professor, you may or may not know this.

A previous group on this committee did a fairly major study on procurement. And the members, I understand from the clerk, will be getting that procurement study report. The government response will be going out to your office today. So you'll have that. If you recall, I was part of that.

As you noted, I think we're all fed up with how long it takes to buy major equipment around here, but we heard the same frustration in a lot of countries, so we're not unique in that regard.

Now I want to go for seven minutes to Mr. Bagnell, please.

• (0955)

Hon. Larry Bagnell (Yukon, Lib.): Thank you for coming.

I'm delighted to be able to speak today, especially after the new depoliticization of Bill Blaikie.

I spent the first few meetings totally on Arctic sovereignty, and I think the chair thought I got my point across. I was delighted that he raised the point again today, so it would be my responsibility to follow up on that, of course.

I'm just wondering if you have any comments on why we have failed over the last couple of decades to protect our Arctic sovereignty, either in our white papers related to sub acquisition, for instance, nuclear subs, or any types of navy vessels that could go on top of or under the water or through the ice. We don't even have a navy boat that can go in ice yet in the Arctic. I think Claude Bachand asked you about the future recommendations, because hopefully we will rectify that situation in the near future.

Prof. Martin Shadwick: Thank you.

In terms of the Arctic, the thing that stands out is that our interest in the Arctic tends to be highly cyclical. It takes some incident or episode to spark a renewal of public and political interest. In the 1950s, the question of the American flag flying over DEW Line stations, for example, was a *cause célèbre*. The trips north by the American ice-breaking tanker *Manhattan* in 1969 and 1970 certainly energized the Trudeau government to take some action. For the Mulroney government, the trip north by the United States Coast Guard icebreaker *Polar Sea* prompted the same effect. So we're basically on a ten- or fifteen-year cycle in which the issue disappears off the radar screen, then suddenly there's a burst of energy and activity at the political, media, and academic levels, and then it goes into a suspended animation state.

The point I've always tried to make is that maybe that's not the most sensible way to do it. We need a more stable northern sovereignty policy so that we're not firefighting specific incidents, so that our claim is solid and we're backing it up on a steady-state basis, instead of every so often having to react to a perceived threat to our sovereignty by suddenly bumping up the military presence in the north or taking new legal steps to protect the Arctic environment and that sort of thing. I think that's where we've fumbled the ball. We put the issue on ice—if you'll excuse a horrible pun—and then forget about it and wait for the next crisis.

I'm encouraged of late that there has seemed to be a slight renewal of interest within government and within DND in the last year or two about our Arctic capabilities, which of course are still quite limited. I've always found it fascinating that the Japanese army has more northern terrain vehicles than the Canadian army. I assume that's related to Mount Fuji in some way, although I'm not quite sure what the explanation is. But it does seem rather strange that we would be in that situation.

On our presence in the Canadian Arctic, my friends in the peace movement sometimes take umbrage at me making this observation because they think it's a very nice thing that the Canadian Arctic is in many ways the largest demilitarized zone in the world. On the one hand, as a Canadian I'm proud of that. On the other hand, I'm also uneasy about that, because it's a large chunk of territory on which to have such a nominal military presence. At the moment, of course, that presence is less than 200 people. It's very small.

In terms of the ability of the navy to get into the Arctic, I always thought we made a horrendous mistake in the late 1950s or early 1960s. We did have a proper icebreaker in the navy, purpose-built for the navy and acquired in the 1950s. In an early burst of alternative service delivery, we then decided to transfer it to Department of Transport control and the navy lost that capability. I think that sort of loss represents the pattern that I've found in a lot of my research over the years.

The forces have a bit of a love-hate relationship with roles like sovereignty protection, search and rescue, and fighting forest fires. On the one hand, there are some very positive redeeming qualities to the forces, but they're also afraid of being typecast as doing only constabulary-type functions.

When the icebreaker HMCS *Labrador* was paid off, from the navy's viewpoint it came down to the question of using the crew of the *Labrador* to help man new frigates that were under construction or having the *Labrador*. They opted, I would think quite rightly under the circumstances from their view, to put the emphasis on the pure combat vessels within the navy. If you broach it with the navy today—and I'm assuming this is still true—I don't think they would welcome with open arms any proposal to give them a large icebreaker so that they can operate in the Arctic.

The closest I've been able to come to a capability for a type of ship the navy might be more interested in acquiring would be a new seabed operations vessel, something like HMCS *Cormorant*, which was paid off in the 1990s as part of the defence economies. If it was a seabed operations vessel, a research vessel that had an icebreaking capability—not like a full-fledged icebreaker, but some greater

credibility in the Arctic than a frigate or a destroyer—it might appeal to the navy to get its hands on that type of a ship.

But your basic point I would certainly agree with. This is an area in which we let things fall off the radar screen far too readily.

• (1000)

Hon. Larry Bagnell: I agree that it's demilitarized, but that's the Canadians' demilitarization, not necessarily that of the other countries. I think the reason it's getting some attention is that the Prime Minister's putting a lot of emphasis on it. Most of our sovereignty challenges right now are in the north, they're not on the east or west coasts.

My understanding on the air-independent propulsion systems is that we designed one for these subs and could put it in anytime. The problem is that those aren't really going to increase their capacity that much related to being under the ice. The only thing that would really do it would be nuclear subs. So those air-independent propulsion systems don't have that length of time we would need in the Arctic to be that much more useful than what we have.

Prof. Martin Shadwick: You're quite right. Air-independent propulsion is in the category of something one would certainly like to have on the submarines, but no one should be under any illusion that having air-independent propulsion auxiliary systems would allow an Upholder or any other diesel submarine to visit the North Pole on a whim. You certainly don't get the capability under the ice that you do with a pure nuclear-powered submarine.

The Chair: Thank you, Mr. Bagnell.

Seeing no further questions here, I'll start a second round. I do see second-round questions from Mr. Martin.

Five minutes, please.

Hon. Keith Martin (Esquimalt—Juan de Fuca, Lib.): Thank you, Professor Shadwick, for being here today.

If you remove the constabulary capabilities of a submarine, given the geostrategic environment we have today—in particular with 40 countries possessing subs, including countries like Iran, which perhaps most Canadians wouldn't know—does that move the subs from the category of desirable to essential?

Prof. Martin Shadwick: Certainly it could under some circumstances. The submarine is a formidable weapons system—the combination of covertness and the firepower on the submarine. That of course depends in part on how one arms the submarine, whether one is talking torpedos or missiles of some sort, including potentially a land-attack missile, which then brings up the question of whether one should put a cruise missile on them. This would move it well beyond what would seem supportable in a Canadian context.

The combat effectiveness remains undeniable, and this sometimes gets lost in the shuffle. Certainly if you look at the British experience during the Falklands-Malvinas war back in the early 1980s, the impact of the one or two British nuclear-powered submarines on bottling up the Argentinian fleet is I think an impressive example of what one or two submarines can do. Similarly, the Argentinians only had one or two diesel-electric submarines in their fleet, and although they were not able to inflict any damage upon the British force, it really gave the British a lot of headaches, because they couldn't make any moves without trying to judge where the Argentinian submarines might be. They expended an awful lot of ordnance trying to hunt down and destroy those submarines.

Submarines' military capacities, although less in evidence, I think, to the general public, remain quite formidable. The stealth and covertness of submarines, by the way, does reflect the silent-service image of submarines. The submariners and submarine communities don't tend to want to talk a lot about capabilities of submarines to some extent because that covertness goes beyond the purely operational aspects. We know that the Americans have used nuclear-powered submarines on counter-narcotics work in the Caribbean, for example, but you don't read a lot about that.

• (1005)

Hon. Keith Martin: Sorry to interrupt you. I asked this in the context of your comments that I completely agree with. You and others have said that the bang for your buck you get particularly with the torpedos with which we are arming ourselves is quite considerable. Given that the operating costs are lower than a frigate, you actually get an awful lot out of that sub. I'm just trying to establish whether, given the environment we have today—and as you said, we cannot predict what's going to happen in the next 20 years—this is a prudent investment.

Also, you commented on the cost factor, saying that the academic community was perhaps ambivalent to some degree about the purchase of the subs, but the cost factor being very reasonable moved it into that essential category.

Prof. Martin Shadwick: I think the answer in part to your question comes from how one envisages Canada's navy being used in the future. If it's going to go into harm's way into certain operating scenarios, even under a UN mandate, where you're facing an opponent with other submarines or other capabilities, then the war-fighting or war-detering capabilities of the submarine do appear more compelling. Then you're into a cost-benefit analysis, in a sense. In a certain mission does a frigate make more sense than a submarine? The answer is going to depend in part on the exact operating environment, the theatre of war you're operating in, and who you're deterring or preparing to fight, if need be. Certainly on occasion the submarine might be a much more compelling answer to the question of how to put the capability into the region. On another occasion the frigate might be your better choice because the helicopter gives it certain capabilities. It really comes down to the exact type of mission you're trying to do.

There are examples, though, to pick up on a theme I think you were headed toward, of NATO diesel-electric submarines operating in support of the UN NATO forces in the Balkans during that conflict. There are interesting examples. The pity is we don't really have—or at least if we do have it, I'd love to see it—a full inventory

over the post-Cold War period of how navies have used their submarines in terms of domestic constabulary-type missions and overseas missions in support of counter-narcotics work or enforcing UN sanctions or demonstrating a forward presence by the UN or NATO.

Hon. Keith Martin: I have one last question. It's unfortunate we don't have more time, because you've brought up many important issues, not the least of which is the issue of procurement. I know the government is seized with this, as is the department. As you know, Admiral Jarvis has been working very hard to try to alleviate the congestion, if you will. What suggestions would you have on ways we could shorten the procurement process for the acquisition of military hardware?

Prof. Martin Shadwick: Within DND, Mr. Williams, the ADM Materiel, is certainly seized of the importance as well of chopping these procurement lead times down as much as possible. Certain things can be done within the ADM Materiel empire. A lot of these delays aren't political. It's too easy to say that's all the politicians' fault. There are internal machinations at the bureaucratic level within DND, the forces, and other government departments before it moves up into the purely political realm. It's a matter of trying to cut the paper flow and the number of interminable meetings and to get the requirements written quickly and coherently and to really stick to the rules.

You find some interesting examples of innovative procurement in the U.S. I don't mean recently. American procurement at the moment is in a very messy state. When the Americans developed the two fighter planes that became the F-16 and the F-18, the U.S. Air Force statement of requirement that went out to industry was incredibly short. It was basically just a few pages. The industry was absolutely amazed at this. They gave them a very simple set of requirements they were looking for and said "Do your best, and let's see what you come forward with". They came forward with the F-16 and the F-18, which went on to be most formidable aircraft and very cost-competitive.

Let's get back to basics—what's essential in this requirement; let's get it into the system quickly. There's a lot of things like that we could do that would help immeasurably. Maybe half the battle is that people are a little more seized of the importance of this issue. So Mr. Williams hitting this theme I think is important.

I'm not sure whether the decline in project management expertise within the department helps or hurts on this front. As everyone on this committee is well aware, the department's in-house management capabilities have diminished because of the loss of personnel and the downsizing. It would be nice to say that took layers of bureaucracy out and sped up the process, but unfortunately it doesn't seem to have worked in that manner. The shortage of experienced people to cut around the dead ends and trouble spots has actually done more harm than good. I would aim a multi-layered attack on the problem within DND and the forces and the other government departments that are stakeholders and at the political level as well in order to get the key message out that this is taking time and money and we need a faster system.

• (1010)

The Chair: Thank you, Mr. Martin.

That was two full rounds. I have a couple of questions for the witness, and then we'll see if there are any final questions from colleagues. We have another part of the meeting to deal with. I know the agenda indicates 9 to 12, but I'll recall for you that we're still working to a 9 to 11 timeframe. If we really need that third hour by the consensus of the committee, we would use it. But I don't think that's the sort of the thing we want to work toward. We want to try to work to the 9 to 11 timeframe.

Professor, I've studied the Second World War a fair bit. I certainly don't purport to be an expert. It was interesting to hear your comment that if we had ordered a jeep in 1939, at today's pace we wouldn't have had it by VE Day, or even VJ Day, I take it. Of course, we're not under wartime production now. As we all know, the whole nation turned its attention to wartime production, and women were pressed into service to work in factories, etc. I think Hitler had a way of focusing the mind when it came to military procurement in Canada, the States, and other places.

Having said that, it is ridiculously slow to get military equipment purchased in this country, and many of our allies have bemoaned the same fact.

I have three questions. If you could give me succinct answers to these, it would help to flesh out your testimony. Do you have any specific knowledge about the training of our submariners, and if you do, what constructive criticism would you offer? The second relates to my friend Mr. Bachand and his question on UAVs. He asked several questions, and I'm not sure you had a chance to speak to the UAV question. The other item is something you referred to in your opening comments, which we have discussed at our committee, and that is the issue of spare parts for the subs.

Prof. Martin Shadwick: Thank you.

On the training front, if we'd been able to get our hands on the Upholder class in an expeditious manner, the refurbishing phase, to get them basically serviceable again, and then the Canadianization phase, our training regimen I think would have served us pretty well. I mean, our people on the whole are well trained. Admittedly, even if we'd been able to take delivery of the first of the Upholders two days after the contract was announced, there certainly would have been a learning curve—not on the fundamentals of how to operate a submarine, but the Upholders had a far more sophisticated electronics package on them, which would have required bringing our people up to speed. The O-boats, of course, didn't have all that much in the way of sophisticated electronics. They weren't helpless; they had much more than a periscope. But it would have required some time to make that transition.

But with their being British submarines, and given that the submarine service was well trained, I think we could have moved pretty expeditiously on that.

The problem came as a result of the delays, both in the procurement of them and then the amount of time to reactivate and Canadianize them. So over really the better part of a decade, we were losing people out of the submarine service who were taking invaluable experience with them, leaving a diminishing core of really experienced people to carry the load on this one and having to put newer-intake people into the system.

●(1015)

The Chair: On that very point, we've heard from witnesses who've said...we have conflicting testimony on this point, and that's why I ask you as an academic expert in this area.

It was clearly stated at this committee by some witnesses that because of the problems you just referred to there was inadequate training of some of our submariners to make up for a shortfall in the numbers of people we had trained. And some of this was driven by the need to meet the demands of the British before they'd turn over these subs. This was to the point that some witnesses felt that people have gone to sea in submarines unsafely.

Could you share your view, briefly?

Prof. Martin Shadwick: I share some of those concerns. It's hard to tell as an outsider looking in at that what the relative experience levels of the people who have been in the submarines over the past four or five years have been. My sense is that there's been a diminishing of experience levels—people who are new to submarines and in some cases relatively new to the navy as well. That bears very close scrutiny, and again throws into sharp relief the delays in getting the submarines into service and a long dormant phase.

It also demonstrates something else, by the way, as an aside. To go back to my point earlier about losing capability and skill sets within the armed forces as part of a niche model—in this case it happened accidentally that the capabilities of people were run down—if you need to regenerate or recycle a capability that you've allowed to decay, it's very tough getting it back.

The Upholder-Victoria class program is a splendid example of what happens. It was an unintended example of what happens when the capability is allowed to slide down and then you decide you do need it and the machinations of trying to get back to that point. It does remain a concern. The British naval architect I cited earlier this morning in his commentary on our difficulties with the Upholders said:

The Canadians got a splendid bargain, although there have been problems getting the boats into service, possibly due to lack of experience with the boat's equipment.

This has attracted some foreign attention as well.

On the question of UAVs, there's great potential here. I think one has to keep it in perspective. Every defence establishment in the world is visually leaping through UAV manufacturer brochures and so on looking for the systems. There's a lot of heat coming off these systems, but to this day there are still not huge numbers of UAVs actually functioning in the real world. Some that are functioning still have difficulties of an operational or technical nature.

In a Canadian context there are multiple requirements. One is the type of system that we took to Afghanistan, for example. We still need to develop further those tactical capabilities basically in support of the army. On the domestic side we of course have done some trials with the longer-range, larger UAVs in the Arctic and off the coast. My recommendation, for what it's worth, would simply be to continue with those trials and find some products that would fit logically into what we perceive as valid operational requirements.

As a supplement to aircraft, it is very tempting to say if you buy some large UAVs you can chop your war fleet down. My response to that would be to see these as complementary capabilities. The UAVs bring certain things to the table that the Auroras don't, but the flip side is also true, so that any idea of replacing all but three or four Auroras with the UAVs would effectively be a non-starter. These are complementary capabilities.

The question of spares is an interesting one. I can recall discussions with senior naval officials at the time the acquisition of the Upholders was announced, expressing some concern over the orphan status of those submarines and what we were going to do. The answer that I got, and these weren't high-level inquiries but a more general discussion, was that we would get a pretty comprehensive package of spares from the Royal Navy as part of the arrangement.

I pointed out that in due course those would be exhausted, because the British presumably did not have an infinite supply of consumables for those boats. Even the Royal Navy's ability to forecast exactly what spares inventory was necessary would have been somewhat limited by the fact that they had so little time in Royal Navy service. The Royal Navy itself might not have been fully conversant with what Upholder-class spares usage was going to turn out to be five or ten to fifteen years later.

One interesting observation that was passed along to me was that in certain cases—I think it was actually more than a few—the navy's view was, at least unofficially, that there were some systems in the Upholders that were common with British nuclear-powered submarines. Obviously it was nothing behind the engine room door, but other systems—optics, sensors, and so on—were common, so they would still be available through the British pipeline. We would have to go through the British vendors to buy them, but they would be available. Certain key items—I assume the periscopes might fall into this category as well—would be available because the Royal Navy was buying them for their nuclear submarines.

• (1020)

On this question of commonality, though, the more we Canadianize these submarines, the less they have in common with British nuclear-powered submarines. We're changing out certain key systems to go to American torpedos, like the fire control systems being changed, which then starts to raise at least potentially questions on sourcing spares from the United States and whether we'll have any difficulties there. Certain things that we're installing on these submarines that are American in origin are not necessarily found on American submarines. So there are, to my mind, still some interesting spares issues and life cycle support issues.

The Chair: Thank you very much.

That competes the second round. As I say, we're working in the nine-to-eleven timeframe, so I don't think we're going to have a full third round, but I'm ready to give any other member one or two final questions, if they have any.

Monsieur Bachand.

[*Translation*]

Mr. Claude Bachand: I'd like your take on the situation, Professor Shadwick. We when toured the submarine in Halifax, I

asked Admiral MacLean how a submarine could be made more Canadian by outfitting it with American torpedoes. Isn't this more a case of Americanizing a submarine?

[*English*]

Prof. Martin Shadwick: Yes, it is, indeed. These are becoming increasingly multicultural, multinational submarines, which to some extent we were doing with the Oberon class anyway. We'd put a fair bit of American technology into the Oberon class as well. In fact some of the systems, as I understand it, that we're putting into the Upholders are being taken literally off the older submarines and transferred onto the Victoria class. So the American content is increasing.

There's not a lot we produce in our own industry, so that when we say "Canadianize" it would actually mean Canadian-sourced equipment. The submarines will have a bit of a split personality, with the work that we've physically done on them combined with British systems and American systems on there, and probably some other European systems as well.

[*Translation*]

Mr. Claude Bachand: Thank you.

[*English*]

The Chair: Monsieur Bachand, merci.

Mr. Bagnell, you have a couple more questions, and then we'll move on to the other work.

Hon. Larry Bagnell: Yes, thank you.

I'd just like to discuss a bit about the conservation and the time lag. You were suggesting that there's potential for discussion here, that the British might have conserved them better in the time they were waiting for us to get them, because we were taking a longer time to collect them. And in fact *The Toronto Star* suggested that leaks, electrical snags, and other problems were caused by the delay.

I can't buy that, in that the British had the responsibility, when we made the deal, to put them in good condition. They had to pay for that. We had our engineering experts and theirs check them. I will grant that leaving them could lead to decay, but it's somewhat irrelevant when in fact the deal was that they'd be fixed up before we bought them or put them into operation.

Prof. Martin Shadwick: You raise a good point. To the extent that the British had provided warranties to us, it meant that if they were trying to save a few pounds on preservation costs, they would get hit later on because things that they were contractually obligated to fit would be deteriorating. It's difficult to imagine that they would not have perceived this themselves, that there was a strong rationale for them to preserve these submarines in a useful state for a prolonged period of time.

On the other hand, there is also some anecdotal evidence that perhaps they could have been a little more thorough and might have been expecting a quick turnaround in the sale of these submarines. And if they had gone to truly elaborate precautions to preserve and mothball these submarines, which would have to be yanked out very soon thereafter anyway, it would have then slowed down the process, because if you really preserve something to the nth degree, de-preservation takes time as well.

The British may simply have been under the impression that the Canadians or another export customer—because they were first talking to other countries, at least at low levels, about those four submarines as well—was going to make the purchase rather quickly, and therefore that money spent preserving them would simply be wasted money and therefore not worth doing. And of course their defence budget is under as much pressure as ours in some respects.

Navies tend to park service ships because service ships form the dominant part of—

•(1025)

Hon. Larry Bagnell: Sorry, could I just stop you there? This isn't the point I was getting at.

You could debate all that, and I don't really care about all that. What I care about is what happened at the end and whether it's part of the problem. What I'm suggesting is the deal was that they had to fix them up regardless of whether they had deteriorated, and the fact that they sat there did not, as *The Toronto Star* suggested, cause the leaks, the electrical snags, and the other problems that might have caused the accident. It was not the fact that they sat there, because the deal was that they were to be fixed up. Whether they had fallen apart completely or not, the deal was that we received subs in good condition and that both our engineers and the British engineers checked that. So I'm suggesting that the time lag really is a moot point.

Prof. Martin Shadwick: Logic would suggest they would have taken every precaution to preserve those vessels properly and appropriately, knowing that if things developed because of a failure to do so, ultimately they would wind up paying a price themselves—not just a financial price, but in damage to their reputation as arms merchants, if nothing else. It looks rather sloppy, because the Royal Navy has other ships up for sale and doesn't want to get a reputation on the open market for failing to preserve stuff in a credible manner. The first thing foreign customers looking at second-hand British equipment would say to them is that they messed the Canadians around, that they didn't preserve the ships properly. Surely the British would have realized that.

I would tend to agree with your assessment of the *Toronto Star* article, but I still have anecdotal concerns. It might even be that the British themselves lacked experience in preserving for any length of time—

Hon. Larry Bagnell: I'm sorry, you are still missing the point. That's interesting, but it's not the part I'm interested in getting at. The point is, regardless of whether the preservation was good or bad, the deal was we were to get them in good shape. All I'm saying is no one should be able to blame that problem on the ultimate accidents, because regardless of how wreck-like they got—and it may have been bad—we got them in good shape. We had our engineers check

them; their engineers checked them; they had to pay to clean them up. That should not have been the cause of any problems, if that's what occurred. That's what we've been told occurred.

What I'm saying is, the submarines may have been in a mess—who knows? That's another debate. But on the day we got them, our engineers and British engineers had checked that they were in good condition, and the British paid to make sure they were in good condition, so all that other stuff should have been academic. That should not have led to any undue operational problems, regardless of whether they sat for one year or a hundred years, because we bought them in refurbished good shape, approved by both countries' engineers.

The Chair: Have you any brief observation on that? That is not specifically what you're here for.

Prof. Martin Shadwick: In theory I would agree with that analysis, but I have some lingering concerns still.

The Chair: I will give the last question, or two if he wants, to Mr. O'Connor, and then we will move on to the second part of the meeting.

Mr. O'Connor.

Mr. Gordon O'Connor (Carleton—Mississippi Mills, CPC): In fact, this isn't a question; it's a statement.

You're ignoring physics and the second law of thermodynamics. When something is left and not properly maintained it decays, and that's what happened. The government's decision to delay this for four years allowed these submarines to decay. I'm not going to argue whether they were corrected properly at the end, and who did it and who didn't do it, but you can't argue the fact that a four-year delay meant that these submarines sat in salt water for four years and deteriorated, and that added to the technical problems. That's the point being made.

•(1030)

The Chair: On behalf of the committee, I want to thank you, Professor Shadwick, for sharing your expertise with us. It's important that we touch all bases here, and you will be followed by a couple of your colleagues next week from the academic world. We look forward to their testimony as well. Thank you very much. We appreciate your attendance here.

Prof. Martin Shadwick: Thank you.

The Chair: Colleagues, we're going to stay in public session.

Do we want a one-minute tea break? As Professor Shadwick moves away from the table, if anyone needs a quick refreshment, take it. Then we'll move on.

Mr. Martin is going to have the floor in a moment to give us an update on a matter.

We will suspend briefly—for a couple of minutes.

•(1030)

(Pause)

•(1033)

The Chair: I'd like to reconvene the 19th meeting of the House of Commons Standing Committee on National Defence and Veterans Affairs.

We've completed the first part of our meeting with Professor Martin Shadwick on the submarine acquisition, and now we move to some committee business. The first item is, as requested, that Mr. Keith Martin, Parliamentary Secretary to the Minister of National Defence, was asked by the committee to look into a case involving a Mr. Wenzel that had been raised earlier by member Mr. Gordon O'Connor.

Now, Mr. Martin, I'm going to give you the floor and ask you to bring the committee up to date as to what you've been able to ascertain about this situation.

Hon. Keith Martin: Essentially, without any shadow of a doubt, Mr. Wenzel was a person who served with great distinction during World War II. He is an individual who did leave the service of his own volition. All procedures were followed with respect to the manner in which he left, and he left, as I said, of his own choice. Subsequent to that, Mr. Wenzel asked for a pension. It was brought to court and the court said he didn't have a case, but the bottom line is that the minister has said he will take a look at this to make sure that due diligence has been taken.

But the court said that the government, the department, has always treated Mr. Wenzel fairly and within the rules, and that is the situation right now.

•(1035)

The Chair: Are there questions from anyone?

Mr. O'Connor.

Mr. Gordon O'Connor: Mr. Martin, you're saying the minister is going to review this case, but it will be from the point of view that all procedures have been followed.

Hon. Keith Martin: That is correct.

Mr. Gordon O'Connor: Will he also look into all precedents, that is, treatment of other individuals? Their treatment as individuals doesn't matter to me, but I believe there are other individuals in similar circumstances who were awarded pensions. I hope that when the minister reviews this, he takes into account that precedent has been made in other cases and decides that in light of that he should look again at his decision about Mr. Wenzel.

Hon. Keith Martin: Mr. O'Connor, if someone chose to leave the service and wanted to get a pension at the time Mr. Wenzel left, they could take two courses of action. Course one split into two once someone made a decision to leave. If the department, the Government of Canada, felt it was in the interests of Canada that the person leave, then the person would receive a pension. If it was not felt to be in the interests of Canada that the person leave, then the person would not receive a pension but would be able to receive

back all of the contributions they had made. That was the law, that's what was explained to everybody who went into the service, and those are the conditions a person was offered when they chose to leave at that point in time. In the case of Mr. Wenzel, that course was followed and the court supports that.

As for individual cases, if you were referring to individuals who did receive a pension but the rules I just described were not followed, then please let us know. To our knowledge, such a person doesn't exist.

The Chair: Mr. O'Connor.

Mr. Gordon O'Connor: The point I'm making concerns the term "in the interests of the service", "in the interests of the government", or whatever the precise term is. There were decisions made on specific cases where it was determined it was in the interests of the government. For instance, I assume that if somebody wanted to jump to the public service, the government said it was in its interests or something like that.

I am aware that there are other cases out there where the government decided it was in the interests of the military, so they gave the person a pension. I'm just saying I would like the minister to compare the conditions of these other people, people whose departure was determined to be in the interests of the government, with Mr. Wenzel's.

Mr. Wenzel went into the air reserve and served for many years organizing and being basically a spark plug there, which to me was in the interests of the Canadian Forces.

The Chair: Let me make one suggestion, because we could probably go back and forth a long time on this. We certainly want to make sure there's no injustice, and I think the minister would want to make sure of that as well. I assume that's why he's going to review this.

Mr. O'Connor, you could either write to or meet with the minister yourself—I find him a pretty approachable person—because I think you're the most knowledgeable about this case. Or you could ask the committee to write to the minister, outlining the kind of matters you just spoke to. In other words, if you want to ensure the minister does certain things related to this case, you could either speak with him personally, write to him personally, or if you want to make it more formal, have the committee write to the minister and say we want to make sure certain issues are not ignored when he's reviewing this case.

Do you have any thought on that?

Mr. Gordon O'Connor: I guess my preference is that the committee ask the minister to consider some of these other conditions before he makes his decision. Because to me, in the past decisions were made by various people interpreting what was in the interests of the military. I'm not talking about the other cases; I'm not even questioning the other cases. But Mr. Wenzel immediately transferred into the air reserve and helped organize the air reserve, which was certainly in the interest of the military.

•(1040)

The Chair: Mr. Martin.

Hon. Keith Martin: I have a couple of points.

No one disputes, Mr. O'Connor, the service that Mr. Wenzel has given to our country. There's no disputing that whatsoever. But the questions you're posing, which are good questions, were posed during the court case and have been posed before at a number of levels.

Mr. Wenzel was very aware and knowledgeable of the conditions upon which he entered service and the conditions upon which he left. He knew full well that the conditions of service were that when you were leaving, you had an option. You could stay if you wanted to, but if you chose to leave, and it was deemed not in the interest of the Government of Canada or the nation that you stay, you would not receive a pension and you would be able to receive your contributions back.

The individual has a choice: do I stay or do I go? He chose to leave and pursue other avenues in the private sector, including his excellent work in the reserves.

I asked this question: Is this a hardship case? Has Mr. Wenzel somehow fallen on hard times? By his own admission, that is not the case. I think it's important for the committee to be aware of that, because certainly in no way, shape, or form do we want any of our veterans to be suffering economically, and we'll do our very best to make sure that they don't.

But Mr. Wenzel's case is not a case of economic hardship.

The Chair: I'm going to interject for just a second and thank Mr. Martin for his update. I'll hear Mr. O'Connor in a second if he has another point.

I'm going to propose that as your chair, I write to the minister on the committee's behalf saying that we received this representation on Mr. Wenzel's behalf from Mr. O'Connor, that Mr. Martin was asked to investigate it and report back, and that he's now done both of those things.

The committee wants to make sure that not just the letter of the law—which may very well have been followed—but also the spirit of the law or the rules is being fairly applied here in the case of Mr. Wenzel. We want to ask the minister to review his case, taking into consideration the points that Mr. O'Connor has made. I'm quite happy to write to the minister on your behalf if that's the will of the committee.

Did you want to speak to it, Gordon?

Mr. Gordon O'Connor: Just to respond to Mr. Martin, to me it's academic whether Mr. Wenzel is impoverished or not. This is a matter of principle. There may be other people in similar circumstances, in similar conditions, who may be impoverished, but to me that's incidental. We're dealing with Mr. Wenzel's case right now.

The Chair: That's right.

A last brief point, Mr. Martin, and then we'll move on.

Hon. Keith Martin: The reason the minister is actually going to review the case is for the very reasons that you mentioned, Mr. Chair. He wants to make sure that the letter of the law has been followed, but we also want to make sure that the meaning of the law is followed. That's why he's going to take a look at it again.

The Chair: Well, that's great. Knowing him as I do, and the person he is, I assumed that to be the case.

I'll get to Mrs. Longfield in just a moment, but unless I hear strong objections otherwise, requiring a vote—and I don't think I do—I'm going to ask the clerk to draft a letter outlining the nub of this discussion, thanking the minister also, as we understand he's going to take this case under personal review, and asking him to ensure that certain important factors are not ignored—and we'll enumerate those factors.

Is that okay? That's what I'm proposing to do.

Mrs. Longfield.

Hon. Judi Longfield (Whitby—Oshawa, Lib.): Mr. Chair, the minister has already, through his parliamentary secretary, given an undertaking that he's going to do that. I don't know why we then need to write him a letter. He has made that undertaking. If he doesn't do what he says he's going to do, then I think it would be appropriate for the committee to write the letter.

The Chair: With respect, I think you missed part of my comments.

Mr. Martin indicated that he's going to do a review, and we're grateful for that. That's appropriate. But he did not indicate that he's going to factor in some of the important points that Mr. O'Connor has raised, and that's the purpose of the letter.

So, Judi, that's the only point in writing to him, to say, "Great, we hear you're reviewing this, and we want to make sure the spirit of the law, as well as the letter of the law, is followed. We just want to ensure, Minister, as a committee, that you don't forget certain factors that the committee thinks are important."

Is there consensus to do that? Okay, we'll do that. Thank you.

We're just about finished.

Mr. Kenneth Calder, ADM for policy, is available to this committee on either March 8 or March 10. Is there a desire to have Mr. Calder come to the committee?

Mr. Casson.

● (1045)

Mr. Rick Casson: As we get through February and into March and we're still receiving witnesses, I am concerned that to some degree we might be spinning our wheels here a little bit.

I would really like to focus on getting a report prepared. I know we talked about all these issues the other day. Whether the inquiry information is given to us or not, I still feel that we as a committee have to bring this thing to some kind of conclusion or partially to a head here, because we could just keep going on and on.

We were looking at the month of March to have the first report, or whatever it's called, done. Now we're talking about still receiving witnesses on March 8 and 10. My feeling is that we need to stop at some time and just deal with what we've heard.

The Chair: I'm in your hands. As I said, part of the problem in our delay, as we know, is that we have to have the documents in translation in both languages, and we've been assured now that we're going to get that in the near future.

It's up to the committee. I think there was a committee decision, last meeting or so, that we wanted to hear Mr. Calder. I don't want to make a career out of this topic either, but I want to make sure that whatever we produce as a report has some credibility.

If we think we're happy to finish with Mr. Williams as our last witness, fine. If we think we want to bring in Mr. Calder, then—

Mr. Rick Casson: Is there no option for Mr. Calder to come in sooner?

The Chair: I understand he's not available sooner.

Madam Clerk.

The Clerk (Mrs. Angela Crandall): He's going to be travelling. That's the problem.

The Chair: Mr. Martin.

Hon. Keith Martin: I agree with Mr. Casson. We need to get on with this and get on to larger issues that are really important to our men and women who serve in our Canadian Forces.

Although Dr. Calder has been the chief policy person in the department for more than a decade, I don't think he's going to add anything to what we already know. We have heard all the relevant experts. We've heard the best people with the most knowledge on this issue. I don't think, quite frankly, listening to any more witnesses will add a whole lot to what we already know. I think we should get on with it.

The Chair: Okay, fair enough.

As your chairman, I have to take your direction as a committee. There was a committee consensus to invite him, last week or in the last meeting or two. Since he's not available until later than we hoped, I'm now hearing a consensus to not invite him. So that's what I'm going to do. I'm not going to invite him unless somebody puts a motion otherwise.

So we'll go along and reserve the right to call him later as a witness if we want to, but right now we'll put that in abeyance.

Hon. Keith Martin: On a point of order, Mr. Chairman, there wasn't consensus on the request for the letter going to the minister. Did you understand that?

The Chair: There was a consensus.

Hon. Keith Martin: There was not consensus.

The Chair: There was not consensus?

Hon. Keith Martin: No.

The Chair: Well, then, let's have a motion.

That wasn't the way I understood it, but I'm glad you've clarified it.

I need a motion, then—from Mrs. Hinton, seconded by Mr. Bachand—that I write to the minister on behalf of the committee, expressing our thanks that he is going to personally review the case of Mr. Wenzel, and expressing the fact that we have had an update from Mr. Martin, as per the request of Mr. O'Connor and the committee, and that while we're pleased the minister is going to undertake this review, we just want to ask him to ensure that he consider certain factors, such as the fact that Mr. Wenzel had a distinguished career later on in another branch.

What was it in, Mr. O'Connor, the air reserve?

Mr. Gordon O'Connor: Yes.

The Chair: So we'll enumerate a couple of points like that.

(Motion agreed to [See *Minutes of Proceedings*])

● (1050)

The Chair: The clerk will draft the letter. Thank you.

The last points I have for you are these. There is a letter coming to you shortly from Colonel Gary Rice. We're getting lots of offers now to elaborate on this or help us with this. I think they're sincerely intended. I don't know whether he's on this so much as on our defence review—I think it's defence review. We could hold that off. But you'll get that letter shortly.

You will get a very relevant letter shortly in response to certain allegations made by one of our witnesses, Mr. O'Keefe. That's coming to you from department officials.

You have a letter in front of you from the former CDS, General Henault, on the cap badge. He tells us in that letter that the issue hasn't been finalized yet, that the chaplain general is undertaking certain relevant consultations. I guess we always have the option, as a committee, to invite him in before he makes his final decision, or not touch that issue, as we see fit. I just put that before you.

The union people who we agreed to hear from—those who do the work on our ships, including the subs—will be coming to the committee on February 17.

I think that's all I have for next Thursday. Are there any other routine matters you'd like to raise? No?

Thank you, colleagues. The committee is adjourned.

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