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CANADIAN AIR LINE PILOTS ASSOCIATION

HEADQUARTERS / 9675 COTE DE LIESSE ROAD / MONTREAL 760, CANADA / TEL. (514) 631-1895

CHARLES H. SIMPSON, PRESIDENT

January 10, 1972

Received by Office
of the

JAN 14 1972

Executive Assistant
Minister of Finance

Honourable Members of the House of Commons:

The skyjacking menace has finally become a reality in Canada. We, the professional airline pilots, are concerned about this grave threat to the future of civil aviation in our country and the world. This concern is reflected in the latest issue of our Association's magazine, which is enclosed.

Canada, as one of the world's leaders in civil aviation, and a country in whose development civil aviation has played a prominent part, should be all the more vigilant in this area.

Legislation that will deal effectively with acts of unlawful interference with civil aviation must be enacted during this coming session of the House of Commons. We earnestly request that each of you support such hijacking legislation. The enactment of these measures can only help sustain Canada's leading role in world aviation.

The Canadian delegations to the Hague Conference in 1970, and the Montreal Conference in 1971, played an important part in drafting the Hague and Montreal Conventions dealing with hijacking and unlawful interference with civil aviation. Although Canada is a signatory to both these Conventions, our government has yet to ratify them. We ask for your support in obtaining these ratifications without delay.

The Ministry of Transport, in cooperation with Canada's air carriers and aviation associations, including CALPA, has developed a security program. We are confident that this program can be a deterrent to the hijacking problem, if it is fully implemented. Only through your active support can this be assured.

We thank you for your consideration of these serious issues.

Yours very truly,

Charles H. Simpson,
President.

Enclosure

PILOT

the journal of the
Canadian Air Line Pilots Association
Winter 1971/1972
Volume 28, Number 4

**Hijacking
Legislation:
We've waited
five years.**

'67|68|69|70|71

**How much longer
must we wait?**

'72|73|74|75|76

THE CANADIAN
AIR LINE PILOTS
ASSOCIATION

would like to take this opportunity
to extend

Season's Greetings

TO ALL OUR FRIENDS AND ASSOCIATES
THROUGHOUT THE WORLD
AND TO WISH ALL OF YOU
THE VERY BEST IN 1972.

PILOT
The Journal of the
Canadian Air Line Pilots Association
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Legislation:
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'72|73|74|75|

COMMENT ...

With the November Air Canada hijacking still fresh in our minds, we feel compelled to show our dissatisfaction in the progress of implementation of legislation to cover crimes of hijacking and sabotage — hence our cover!

And even when this legislation is enacted, what of the security measures which are obviously lacking at our airports — should our government and the airlines not be doing something more to prevent these crimes from being committed — is this not an obvious first step!

On a lighter note — Jack Desmarais has once again come up with an hysterically funny bit entitled "Exchange Pilots", which is very cleverly illustrated by Dave Crowe — a great team!

We have three points of view on the Moscow Aviation Seminar — see pages 15 to 25, and good coverage of the B.C. Aviation Council Meeting, pages 31 to 35.

An excellent article on heart disease, which every pilot should read and think about — maybe Vitamin E is the answer?

That's all for this edition — we wish you compliments of the season and peace in the new year.

Editor: P. Featherstonhaugh
Production Coordinator: F/O T. Smith

PILOT

the journal of the
Canadian Air Line Pilots Association
Winter 1971/1972
Volume 28, Number 4



G. LORANGE

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editorial . . .

by Charles H. Simpson, President

On November 12th, Captain Vern Ehman and the crew of Air Canada Flight 812, experienced a skyjack attempt; the final action saw Vern Ehman and Purser John Arpin physically overpower the would-be hijacker and avert Canada's second hijack attempt, without tragedy.

CALPA, Air Canada and, indeed, all Canada saluted this heroic crew, but what has been accomplished to prevent history from repeating itself?

CALPA has led a determined campaign for improved ground security, and we are pleased to have participated in recommending many of the security measures now being implemented at Canadian airports. These security measures will hopefully prevent future incidents, but we must ensure that the security program now being placed into service is effective, and every airline pilot should report his observations to the CALPA Council Security Officers. We have assured the Ministry of Transport full cooperation in evaluating the security at Canadian airports.

The failure to date of the Canadian government to ratify the

Hague Convention and the Montreal Convention is, to a large degree, complicated by the fact that revisions to the Criminal Code prevent Canada from honouring all of the tenets of these Conventions. CALPA, almost two years ago, recommended detailed changes to the Criminal Code which would facilitate the ratification of these Conventions. We must continue to press the Justice Department, as it is a well known fact that failure to adequately prosecute hijackers is often due to loopholes in the judicial system.

Legislation is important but a good security program is essential! The air carriers must accept their obligation to the air traveller, and indeed their employees, to ensure that precautions are taken to prevent skyjacking and sabotage. Canada's two major international carriers must fully adopt the Ministry of Transport's security program, if Canada is to meet its responsibilities to the International Aviation Community.

The only Canadian airline that has implemented a positive security program to date is CP Air. CALPA has expressed its concern to Air Canada over its failure to recognize fully the danger of an

inadequate program, and we have offered to assist Air Canada in establishing a program. This offer is being carefully studied at the present time; we hope it will not be too late!

The aviation industry continues its economic slump and in the face of escalating costs, air carriers are more budget conscious than ever before. It is absolutely essential that security is not sacrificed for reasons of cost, and CALPA will continue its campaign to place "clean" aircraft in the skies in 1972.

As professional airline pilots we must be involved in security. It is our duty to make a meaningful contribution by observing the deficiencies of our industry. We must not allow CALPA's successful campaign to be thwarted by accepting the new security measures 'carte blanche' — we expect every pilot to accept his duties in a professional manner; the duties of an Aircraft Commander include safety, and Vern Ehman demonstrated his responsibilities on November 12th as a truly professional airman.



What next!

On November 12th last, a DC-8 aircraft departing Calgary and en route to Toronto was hijacked by a passenger who boarded the aircraft at Calgary. This passenger emerged from the washroom wearing a mask and brandishing a sawed-off shot gun. He asked for \$1,500,000. and wanted to be flown to Ireland. The hijacker also had on his person a large quantity of dynamite.

Only the courage and magnificent airmanship of Captain Vernon Ehman and his crew prevented the occurrence of a major disaster.

The Canadian Air Line Pilots Association immediately redoubled its efforts, both vis-a-vis the Government and the air carriers to have effective legislative and security measures implemented in Canada.

In addition to a well presented press conference, and numerous radio and television interviews, CALPA also issued the following telegrams and press releases: —

"The Honourable Mitchell Sharp

The recent spectacular hijacking of an Air Canada aircraft points out the need for immediate Government action in this area.

"The Canadian Air Line Pilots Association urgently request the Canadian Government to ratify both the Hague Convention for the Suppression of Acts of Unlawful Seizure of Aircraft and the Montreal Convention for the Suppression of Unlawful Acts of Interference Against Civil Aviation.

"Further delays in this matter cannot be tolerated.

"The Honourable John N. Turner—

"The recent spectacular hijacking of an Air Canada aircraft points out the need for immediate Government action in this area.

"The Canadian Air Line Pilots Association urgently requests the Canadian Government to introduce legislation making it specific crimes to hijack an aircraft or to carry dangerous weapons or explosives on board.

"Further delays in this matter cannot be tolerated.

"The Honourable Donald C. Jamieson—

"The recent spectacular hijacking of an Air Canada aircraft points out the need for immediate Government action in this area.

"That a man carrying a veritable arsenal can board an aircraft unnoticed indicates a total lack of security measures.

"The Canadian Air Line Pilots Association urgently requests the Canadian Government to implement effective security measures at all Canadian Airports and terminals.

"Further delays in this matter cannot be tolerated."

PRESS RELEASE

"The Canadian Air Line Pilots Association, commenting on Friday's near tragic hijacking, said that the incident serves to point out some glaring deficiencies in Canada's approach to sky piracy.

"Captain Charles H. Simpson, President of CALPA, praised the bravery and sangfroid of Captain Vernon Ehman and his

crew and said that it was through the courage and competence of Canada's air crews that all hi-jackings connected with our Country have so far been foiled.

"Captain Simpson, however, took the Canadian Government to task for having failed to introduce legislation making hi-jacking a specific crime in Canada. Captain Simpson said:—

"In May 1970 representatives of the Canadian Air Line Pilots Association met with the Minister of Justice and we are subsequently assured that legislation making hi-jacking a crime would be introduced at the earliest possible opportunity. Yet, such a relatively simple amendment is not on the books more than 1½ years later and thus cannot be invoked to deal with the present hi-jacking. CALPA also asked at that time for a provision making it a specific crime to carry weapons or explosives on board aircraft. This too has not been presented to Parliament, and we now see that a person can nonchalantly walk on board an aircraft with a sawed-off shot gun and some 40 pounds of dynamite.

"Since 1970, the International Civil Aviation Organization and the United Nations have called upon all States to take effective measures to combat sky piracy and specifically, to make hi-jacking a very serious offence.

"A treaty on hi-jacking called the Hague Convention was entered into about a year ago and is now in force; Canada, however, has yet to ratify this treaty. 000059

failure to enact the criminal legislation mentioned previously. This game of passing the buck cannot go on while the lives of passengers and crew members are at stake.

"Furthermore, the aviation security measures at airports and terminals promised some time ago now seem to have never existed, or to have been relaxed to the point of non-existence. That a man carrying a veritable arsenal can board an airplane unnoticed indicates a total lack of effective security measures and, indeed, a callous disregard for safety.

"Civil aviation must not be allowed to become the pawn of international conflicts, or the favorite target of deranged criminals. CALPA intends to pursue this matter relentlessly with the appropriate departments of the Canadian Government and with the air carriers, and to press for the maximum penalty of life imprisonment for this grave crime."

The following are the comments which were elicited in the House of Commons: —

November 15, 1971

AIR TRANSPORT

HIJACKING — RATIFICATION OF CONVENTION — AMENDMENTS TO CRIMINAL CODE

Mr. Warren Allmand (Notre-Dame-de-Grâce): Mr. Speaker, this question is for the Secretary of State for External Affairs or the Minister of Justice. In view of the major hijacking which took place in Canada on Friday, is the government now ready to ratify the convention on hijacking and introduce articles in the Criminal Code to deal with the matter? I asked this question about a month ago and the government promised to take action.

Hon. John N. Turner (Minister of Justice): Mr. Speaker, on the international front dealing with the issue of hijacking, Canada signed a convention at The Hague

last December regarding hijacking of aircraft and a further convention was signed at Montreal last September dealing with other offences against aircraft, including sabotage. Both these conventions will be ratified as soon as some incidental amendments are made to the Criminal Code, which I intend to bring forward in the very immediate future.

November 16, 1971

HIJACKING — AMENDMENTS TO CRIMINAL CODE

Mr. Eldon M. Woolliams (Calgary North): My question is for the Minister of Justice. In light of the fact that on December 15, 1970, Canada signed The Hague convention with reference to air piracy, and in view of the fact that there is a vacuum in the Criminal Code regarding the laying of proper charges in Canada in this respect and, furthermore, in view of the fact that the other western nations which signed The Hague convention have brought in legislation regarding air piracy, when will the minister be bringing forth a bill?

Hon. John N. Turner (Minister of Justice): In speaking about the introduction of legislation I said yesterday "very soon", or words to that effect. I may say it is my understanding that charges will be laid against the man in Calgary. There are available charges for unlawful interference with an aircraft in flight as well as kidnapping and so on under the Criminal Code. We have not been standing still. We have signed The Hague convention. We have also signed an international treaty in Montreal involving other offences against aircraft, including sabotage. We have negotiated a treaty with Cuba, an extradition treaty involving hijacking, and we are prepared to sign a treaty with the United States involving hijacking.

Mr. Woolliams: May I say with the greatest respect to the minister that it has been a year since we signed The Hague convention.

Would he now refer Bill C-231, which I presented almost a year ago, to the officers of the Crown and if they approve it, it is drawn up in line with The Hague convention—would he then bring it forth as a government measure so that we will have some law in this land regarding air piracy?

Mr. Turner (Ottawa-Carleton):

We will soon have some law. I want to draw to the attention of members of the House that when you deal with a matter such as hijacking, it is essential that both domestic and international law move forward together, and we have been moving them forward together.

Mr. Speaker: We are running short of time and I ask for the co-operation of hon. members to limit supplementary questions. These important subjects might be revived tomorrow. For the moment, I will recognize the hon. member for Surrey-White Rock.

November 17, 1971

AIR TRANSPORT

HIJACKING — REQUEST FOR UNANIMOUS CONSENT TO MOVE MOTION UNDER S.O. 43

Mr. Eldon M. Woolliams (Calgary North): Mr. Speaker, pursuant to Standing Order 43 I ask the unanimous consent of the House to propose a motion on a matter of urgent and pressing necessity. In light of the fact that Canada signed the convention at The Hague last December 16, 1970, in light of the fact that the Canadian Air Line Pilots Association has been pressing the government for legislation to cover the crime of air piracy, and in light of the fact that a terrible tragedy almost occurred on flight 812 out of the city of Calgary, I therefore move, seconded by the hon. member for Peace River (Mr. Baldwin):

That Bill C-231, an act to amend the Criminal Code of Canada, entitled air piracy, be brought forward for second reading

and treated as a government measure to be sent to the Standing Committee on Justice and Legal Affairs for study and final implementation.

Mr. Speaker: The House has heard the motion proposed by the hon. member for Calgary North. This motion is moved under the provisions of Standing Order 43 and requires the unanimous consent of the House. Is there unanimous consent?

Some hon. Members: Agreed.

Some hon. Members: No.

Mr. Speaker: There is not unanimous consent. The motion cannot be put.

Mr. Woolliams: Mr. Speaker, on a point of order, I believe the Minister of Justice really wanted to second it and I am sure the hon. member for Peace River would withdraw as seconder.

Mr. Baldwin: I would, Mr. Speaker

Mr. Speaker: I am not sure that would change the result of the inquiry that has just come from the Chair. Perhaps the hon. member might consider putting the motion again tomorrow in those terms.

November 18, 1971

HIJACKING—REQUEST FOR IMPROVED SECURITY MEASURES AT AIRPORTS AND IN THE AIR

Mr. James A. McGrath (St. John's East): Mr. Speaker, I should like to address a question to the Minister of Transport. What steps has he taken to improve security at our airports and on our airlines in view of the latest hijacking incident and repeated requests from the Canadian Air Line Pilots Association?

Hon. Donald C. Jamieson (Minister of Transport): A great many steps have been, and are being, taken. I am sure the hon. member would not wish me to disclose them in detail in public. We have consulted with the pilots association at each step of the

way. I do not think it is a breach of secrecy to indicate that detection devices have been installed at a number of airports and that others are on order. As soon as they have been received they will be installed. The department has agreed to pay for them so the burden will not be borne by the airlines.

Mr. McGrath: May I ask the minister what steps he is taking to improve security in the air?

Mr. Jamieson: Again, this is a very difficult question to answer briefly. I think we have taken part in every international conference which has been held on this subject. The difficulty is to devise rational responses to acts which are totally irrational. We do the very best we can, and I think that up to now our efforts have received the full co-operation of the pilots and other groups, including the airlines.

Mr. Erik Nielsen (Yukon): Since most of the detection devices to which the minister has referred, or a good many of them, are installed in the major airports on a portable basis, can the hon. gentleman assure us there will be a change of policy in this regard and that permanent detection devices will be installed?

Mr. Jamieson: I cannot give a categorical answer to that question. I can say that we are trying to find the best possible solution to the problem. I am sure Your Honour would not be indulgent enough to allow me time in which to answer in detail. The volume of traffic at certain airports is much greater than at others and we are trying to deal, first, with the airports which are used most. Eventually, I hope we shall have most of our airports covered.

Mr. Speaker: Order, please. I have to remind hon. members again that we are running short of time. I realize the importance of this question, but if hon. members feel that further supplementaries might be left until tomorrow

I will recognize the hon. member for Peace River.

It may be of interest to our readers to recall the texts of the Hague and Montreal Conventions referred to above, and also of Mr. Woolliams' Bill.

The Canadian Air Line Pilots Association is still awaiting positive action on the part of the Canadian Government. Our legislators have repeated their long-standing undertaking to bring forward these measures "in the very immediate future".

We hope that the next issue of the PILOT will contain more positive news in this matter.

Living With The Hijacker

....One Pilot's

Point of View

by Captain J. H. K. Nener,
Air Canada

If we are to face the facts of life, security at most Canadian airports is weak or non-existent; Commissionnaires, all retired soldiers with little or no formal security training, sit glancing at tickets as passengers walk by, while the R.C.M.P. are usually in front of the building somewhere, handing out parking tickets. It requires only an elementary knowledge of a terminal building layout to be able to penetrate unchallenged to its deepest recesses. Several of my friends have experimentally proved this at Montreal Airport by wandering in civilian clothes in and out of gates and all over the building without causing so much as a raised eyebrow. Within my own experience, only two months ago I discovered a passenger carrying two rifles in the cabin on one of my flights — he told me that the ticket agent had assured him that it would be O.K. to carry them in the cabin, and I was inclined to believe his statement. Two years ago, at a time when the airport was well guarded with Commissionnaires, I boarded an aircraft in Montreal to find a man in civilian clothes sitting in my seat, apparently trying to start the

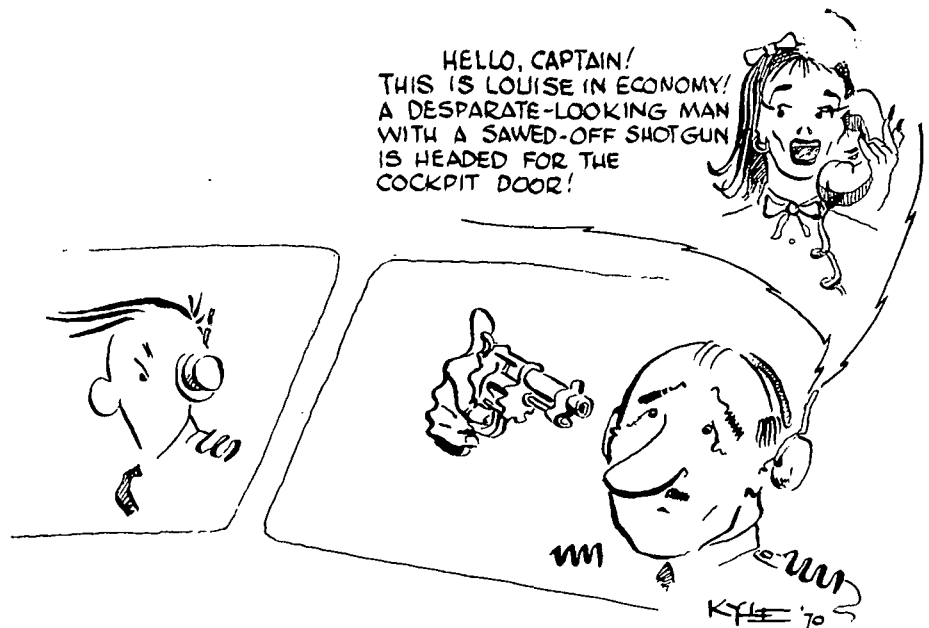
engines. When challenged he muttered that "he had always wanted to learn to fly"; he was led away by the police but later released without charges being laid. Until this situation is radically improved, which appears unlikely in the foreseeable future. I contend that the pilot group can look only to themselves for security and protection from hijackers and mad bombers, and it is way past time that we made some positive and aggressive steps in this direction. During the past few months it is almost a certainty that more commercial aircraft have been involved in hijacking incidents than have encountered rapid depressurization at altitude; flight crews practice depressurization drills daily, yet how many pilots have received any advice or training on the alternatives open to them during a hijacking attempt?

The Air Canada F 50 Flight Operating Manual quite rightly states that our prime concern should be for the safety of our passengers, crew and aircraft, and goes on to say "We are confident that crews will handle any such incident in an appropriate manner". Unfortunately, as things stand, we are left with little alternative but to accede to the hijacker's demands, hoping they will remain within (relatively speaking) reasonable bounds, meanwhile perhaps trying to persuade him to modify or abandon

them. In the face of impossible demands we are helpless — in a kill-or-be-killed situation we have nothing but our bare hands, an axe, a flashlight or a log-book for weapons.

Intelligence and a knowledge of aircraft capabilities may not be a strong point in any of our potential hijackers. What of demands to fly to destinations beyond the range of the aircraft, or to airports where runway lengths are inadequate?

Domestic flights must be considered, if anything, more vulnerable to attack than overseas flights — the searching of passengers and their baggage boarding overseas flights is well publicised, making it obvious to a would-be hijacker that he stands a much better chance on a domestic flight where passenger screening is perfunctory or non-existent. The electronic checking of passengers at major airports would be a step in the right direction, but cannot be considered effective until applied to every passenger boarding at every airport in the world; Montreal and Toronto could be well policed, but there is nothing to stop a hijacker taking a bus to Ottawa or North Bay and boarding there. As has been demonstrated, even the strictest controls are not always effective — one successful hijacking was carried out by a group who had been physically searched prior to boarding the



flight, yet still managed to produce weapons and take over the aircraft.

As in every other aspect of aviation, the final responsibility for the security of the flight rests upon the shoulders of the pilots, and it is our duty to be trained to assess a hijacking situation if it ever arises, ready and able to take the initiative if the opportunity occurs, and equipped to take action if the situation becomes desperate.

Assessing the Situation

The first action in the event of a hijacking must be to determine whether the aircraft is in clear and immediate danger from the hijacker — the sound of gunshots from the cabin, the display of dynamite bombs or hand grenades with the pins removed, etc. — for the moment we will consider the presence of an armed intruder in the cockpit as secondary. Shots from the cabin should have the crew armed (more on this later) and ready to shoot the first person who appears in the cockpit door with a weapon in their hands. Bombs and armed hand grenades would render the crew powerless — any attempt to incapacitate the hijacker would lead to a catastrophe.

Assuming a more conventional hijacking of the "Take me to Cuba" variety, if the demands were technically feasible without risk to the aircraft, in most cases it would probably be safer to comply, meanwhile making every effort to persuade the hijacker that it was necessary to land first for fuel, and that the passengers would have to be taken off to permit the necessary weight of fuel to be carried.

The last situation to be considered is that of the hijacker whose demands are technically impossible, ("Fly me non-stop to Cuba in your Viscount") or constitute some kind of political blackmail, and who refuses to listen to reason; here the crew must make every effort to take the initiative.

Taking the Initiative

There are four actions which I personally would consider as a drill, immediately a hijacking attempt is suspected:

1) In Canada or U.S.A., select transponder to Mode A/3, Code 3100.

2) If not already in use, the auto-pilot should be engaged; however one pilot should keep his hands on the controls to give the impression that he is flying the aircraft — a hijacker would be likely to assume that that pilot was fully occupied in flying and would not be on the alert for an attack from that side of the cockpit.

3) If in use, the cockpit speaker should be turned off. This might afford the pilots the opportunity of discussing any possible action, under the guise of using the radio.

4) If possible, inform A.T.C. then company radio of the situation.

Any attempts to subdue the hijacker, **should the situation become desperate**, are at the discretion of the Captain; two possible courses of action come to mind. In a high-flying aircraft it might be possible to gently depressurize until the hijacker passed out from anoxia — this assumes that the pilots had first been able to don their oxygen masks, possibly explaining their action to the hijacker with some such bland statement as "Company regulations require us to put on our masks just in case your gun goes off accidentally and blows out a window". In such a gambit the passengers could be protected by manually deploying their masks before starting to depressurize.

The second possibility, to be used **only** when the aircraft is in peril, is to lure the hijacker into a position where one pilot may grab and hopefully immobilize his weapon, while the other pilot draws his own gun, and taking very careful and deliberate aim, shoots the hijacker.

The following extract from the book "Self Defense" by Wesley

Brown, U.S.N., is of interest:

"Reaction time of an average person is anywhere from one-half to three-quarters of a second. Thus, the man who acts first gains a distinct advantage because he is acting while his opponent must react. Action is quicker than reaction, and here is a simple little illustration to prove it.

Give a partner an unloaded gun and tell him you can easily knock the revolver from his grasp before he can pull the trigger. Have him watch you, and at your first motion, attempt to pull the trigger.

With a quick motion of your hand, you can easily knock the revolver from his grasp before he can pull the trigger. The answer can be found in that it takes less than a half second for you to act, while the man with the gun requires longer to react from your original motion.

Thus, you can see the need for acting first and quickly when confronted by a man with a lethal weapon. If you can do this, you have made the most important move possible in disarming an armed opponent. In acting first, also be sure to close in quickly on your adversary so you can limit his range of action.

In disarming an armed opponent it is also important to know something about small firearms. Did you know Colt automatics, .38 and .45 caliber, German Luger automatic pistols, Japanese automatics, and other weapons of similar character become inoperative when pressure is exerted against the muzzle? This is caused by a slight displacement of the slide in the barrel of the gun.

Some of the smaller automatics may or may not be affected by this pressure on the muzzle. Still, they can be rendered inoperative by grasping the slide firmly and pushing it back slightly. If the smaller automatic is fired once, it cannot be fired again because the pressure on the slide prevents the pistol from reloading.

Uncocked revolvers with visible hammers can be prevented from

being fired by grasping the cylinder firmly with one or both hands. However, this should never be tried on hammerless revolvers."

Pilot Training

There are many pilots now flying who have not been exposed to basic weapons training, and courses should be arranged with the aid of the R.C.M.P. in the mechanics of popular types of handguns and grenades. All pilots should be able to identify the type of weapon, know whether or not it can be readily immobilised as described above, and know where to look to see if the safety catch is on, where the weapon is so equipped. A type of grapple should be devised for use if a hijacker comes within reach, for instance one where the first move is to grab the pistol from above, holding the cylinder or pushing back the slide as applicable and twisting the weapon downwards, while the second hand holds the wrist, bracing it against the push on the slide, and assists in keeping the pistol from pointing at either pilot. This exercise could be practised with unloaded pistols in the simulator or vacant aircraft, preferably with as little publicity as possible.

Demonstrations should be arranged with the aid of explosives manufacturers to familiarize pilots with the appearance of explosives, and the mechanics of bomb construction; faced with a bomb with a burning fuse, how many pilots would know that the fuse and detonator could be pulled quickly from the dynamite and thrown under a seat etc., where the detonator would explode harmlessly like a firecracker? The dynamite should, of course, be moved as far from the detonator as possible. (The Air Canada crew recently involved in the Calgary hijacking found themselves very much unaware of explosives.)

Pilot Protection

Bullet-proof bulkheads between

cabin and flight deck are technically feasible, but once an intruder has gained access to the cockpit they are of course useless; in the case of the Viscount where the flight deck door has to be open for take-offs and landings they are obviously impractical. For all aircraft a simple, cheap, and fairly effective substitute with a minimum weight penalty would be to fit a steel plate about 1/4" thick inside the back of each pilot seat; this could be disguised with a fabric cover and simply slipped down between the seat frame and the upholstery, and would stop almost any pistol or revolver bullet; it would be a most comforting thing to hide behind in the event of, Heaven forbid, a gunfight in the cockpit.

As we know, "Sky Marshalls" are being employed in the U.S.A.; this is one attempt at a solution, though an armed guard would only be effective as long as he could be both inconspicuous and keep the passengers under constant surveillance — once eating his dinner or gone to the washroom and he would be useless. A guard is also expensive, representing an additional crew cost as well as the loss of a revenue seat. Interestingly enough, though, the only recent case of a hijacking attempt being defeated (El Al) involved an armed guard, although at the time he was absent from his post and was, contrary to regulations, in the cockpit.

Arming the Pilot

Well aware as I am that CALPA policy is against pilots being armed, I suggest that it is time we face realities. The age of chivalry is dead, and the philosophy of "I'm not armed, so of course you won't shoot me" is gone with it.

I visualize two approaches to the technique of arming pilots. The first would be the ostentatious wearing of large weapons, coupled with an addition to the standard stewardess before take-off announcement of a statement such as:

"As our pilots are armed for your protection, passengers are requested not to enter the flight deck." This method might act as an effective deterrent in many cases, but would likely only incite a really determined hijacker into appearing in the cockpit with a stewardess or passenger as a hostage; his first act would then of course be to disarm the pilots.

A more subtle and I think effective system would be for pilots to be equipped with very small, easily concealed pistols; these weapons could be hidden in manual bags on aircraft where these are stowed between the pilot and the side of the cockpit, or carried while in flight in a holster clipped to the pilot's leg just above the ankle; here they would be perfectly concealed, yet made readily accessible if required by a simple and innocent looking hitching up of the pants at the knees. As no weapons would be visible the hijacker would assume that the pilots were not armed, and would likely be more relaxed and less dangerous. At the same time, the pilots would have guns available if a life-or-death situation arose.

At the risk of being repetitious, I must state I believe that the use of firearms by pilots in any 'routine' hijacking would be a mistake — but they should be **available** for use in a situation where **some** action, however desperate, was needed to avoid total disaster.

A worthwhile fringe benefit to arming pilots would be protection from suicidal passengers; as has occurred at least once, a passenger has bought a large amount of flight insurance and a gun, boarded an aircraft, and shot both pilots in flight. In one case the First Officer was describing on the radio what was going on as he and the Captain were being murdered; had the pilots been armed it is likely that at least one of them would have survived to land the aircraft safely.

Weapons and Handling

The requirements for a type of weapon to be used in an aircraft cockpit are fairly simple. It must be effective at close range, yet not so powerful that the projectile would go completely through the target and possibly injure a crew member or passenger; in the event of missing the target, the bullet must do as little damage as possible to the aircraft. The weapon must be small, simple and easily concealed.

Most police departments insist on a minimum of .38 calibre for any weapon to be carried by a policeman — smaller weapons can of course be quite lethal, but lack the "stopping power" of a heavier bullet. For the sake of a more easily concealed weapon for pilot use, perhaps a .32 calibre might be acceptable. Automatic pistols

and revolvers of this size are priced from \$80.00 upwards, an interesting item for contract negotiations. Perhaps your airline would go halves as for uniforms!

Before a "Permit to Carry Restricted Weapon" would be issued by the police, your airline would first have to provide a letter stating that it was necessary for you to carry a gun in the performance of your duties; thus the decision whether or not to arm the pilots remains with airline management. Lockable storage, with keys restricted to pilots who own weapons could be provided at layover points and crew bases so that there would be no problems of guns in hotel rooms. Pilots who did not wish to take their weapons home could also make use of these facilities.

Obviously, anyone who is going to carry a gun is going to

have to be trained to use it — this could be arranged with the aid of local police or pistol shooting clubs. Pistol club membership runs around \$30.00 a year and provides unusual if noisy recreation.

To sum up, I believe more specialized training in dealing with hijackers, guns and explosives should be available to us and that airline management should permit and encourage suitably qualified pilots to carry arms to protect themselves and their passengers.

Editor's note: This article is one pilot's opinion; it is not CALPA policy to arm flight crew. While CALPA continues to press its case for ground security — a "clean" aircraft in the air — the arming of flight crew may become an eventuality. Capt. Nener has considerable training in firearms and we present his article as an example of free expression on a difficult and frustrating problem.

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Exchange Pilots

by Captain Jack Desmarais

It was a long time coming, but through the good offices of IFALPA world airline pilots finally arranged an exchange program. One large, well-known Canadian airline (which I shall refer to as the Air Works) obtained the services of pilots from Mexico, Germany, Japan, France and Poland for one month at a time. While the program was not a run-away success, it at least deserves comment.

Jose Gonzales, the Mexican co-pilot sure couldn't be called 'Speedy'. Once, after a lunchtime turn-around in Montreal, the Captain found himself alone in the cockpit at departure time. A square search was started for Jose who was found sleeping outside the restaurant. "La siesta, senor," he said.

They flew back to Toronto, got cleared down by Arrival. Jose repeated the clearance: "Royer, Aeronaves, sorry amigo, Air Works seex tree wan ees cleared to dee Toronto Huliet beacon, maintain seex t'ousand. I teenk?" "Here, Jose," said the Captain, "you fly for the rest of the month and I'll talk on the blower." "Mucho gratia, Capitano", said Jose. After the last flight of the month, the Captain overheard Jose talking to one of the stewes... "Join me in Acapulco for a week, my pretty one. No one at home knows when I'm due back." Yes, all in perfect English.

From Germany, a young cracker-jack of a Viscount Captain reported to the Air Works' Toronto base. The following story was reported to me by the First Officer who was blocked with him.

"I shows up in Dispatch about 10 early with my usual coffee and proceeds to shoot the bull with the guys whilst smoking a cigarette. In walks this character swinging a



"...his eyes scanned me from head to toe..."

swagger stick and wearing a monocle. 'You are to be Firsh Officer Jones, yah?' 'Yeah,' I answers. While he did not move his head, his eyes scanned me from head to toe. He then marched me over to the Chief Pilot's office, clicked his heels, made a staccato bow and said: 'Dzis flight vill be delayed ein hour while dzis firsh officer gets ein haircut und polishes his boots.'

"Well I did and we finally climbed into the airplane. 'Ve do not make mishtakes,' he said and then he dropped his ball-pen which lodged itself in his rudder pedals. I had to crawl under his instrument panel to retrieve it and when I came out he said: 'You are dirty!' Needless to say, he did everything by the book. Once, during a long leg, I asked him what he would do if there were a 'work-to-rule' campaign. He said: 'Vell, inshtead of checking everysing sree times, ve check it five times!' 'But the more times you do things, the greater the possibility of mistakes,' I said. 'It's better to think, then to do it once, and right.' 'Do not sink,' he screamed, 'dzere ist no order when people sink!' I booked off for the rest of the month."

The Vancouver base proudly welcomed Captain Umiki Toshinara, on exchange from Japan. On one long overseas flight, a stewardess reported to

him that someone appeared to be locked in one of the bathrooms. At least, the person had been there for some two hours. Captain Toshinara told the First Officer: "Prease to excuse a few moments, prease." He put his shoes on and proceeded to the rear of the aircraft, faced the door in question and, with a resounding Ki-yai, slammed the side of his hand into the door. It shattered, only to reveal the purser with one of the stewardesses. Toshinara remained totally impassive. "Please don't report me, Captain," pleaded the stew, "I promise I'll make it up." Toshinara returned to the cockpit, once again removed his shoes and said to the co-pilot: "High speed cluise to Rondon, prease."

The French pilot was a B-747 First Officer. On his first flight across the Atlantic, his performance was flawless. At 50 West the Air Works Captain, ever polite, asked the F/O if he would like to eat first. "Sank you, my captain," answered the Frenchman. He rang for the Purser. "Pursair, what ees ze menu today?" The purser advised him of the choices. "Bon. I shall start wiss a Dubonnet on ze rucks. Wiss ze canapes, I shall have your best Chablis. Consommé au sherry. Zen, ze fish wiss Rhine wine. Between courses, Pernod, of course. I would like Clos de Vougeot wiss ze filet, some rosé."

wiss ze dessert and cognac wiss
ze coffee. Sank You."

The Captain froze at the pole,
his mouth wide open. The S/O, a
Prairie farm boy, stared straight
ahead, his eyeballs completely
out of their sockets. The Captain
finally gulped and opened his
mouth to speak but no word came
out. Three hours later, as they
were approaching the Irish coast,
the exchange F/O finally put his
tray down.

"My Captain, you are not
eating?" The sturdy old Canadian
cleared his throat and declared:

"Well, ah, I never eat crew
meals."

"But ze food is magnifique,
my Captain!"

"Yes. Well, ah, I always eat
in London."

"I will nevair understand
zose Canadians."

The Pole spent the whole month
in the simulator.



"...the food is magnifique, my Captain!..."



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The Industrial Relations Gap

by Ronald Young, Director Industrial Relations, CALPA

The scope and quality of input received by pilot negotiating committees and by headquarters personnel from the Association's membership has, for some time, been a cause of considerable concern. The difficulties in obtaining an adequate information base, prior to negotiations, results in a serious gap in the collective bargaining process; namely, that of synthesizing the preferences of the bargaining unit into the concrete terms of a collective agreement. This gap, I believe, has substantially contributed to long drawn-out negotiations resulting in oftentimes unnecessary confrontations and excessive contract duration. Our answer to this has been the so-called "Christmas-tree" approach to bargaining with the attendant difficulties of too many proposals and not enough direction.

Our negotiating committees, prior to MEC and membership ratification, were almost exclusively responsible for the finished product. After many agonizing compromises, the negotiating committee brought back a revised agreement. The results were so far from the original proposals that it is little wonder negotiating careers were relatively short lived. At this juncture, it is well to point out that our agreements seem to have survived these and other difficulties in more than adequate fashion; a fact which encourages further discussion albeit at another time.

The CALPA questionnaire is our most recent attempt at providing the Association with a more consistent and reliable information platform from which we can more effectively translate general preferences into specific contract improvements.

This article is not an attempt to

characterize the questionnaire as the answer to all of our problems, but rather it is an attempt to review a partial response to the "Christmas-tree" approach, stilted surveys and, perhaps the most encouraging recent development, membership ratification.

It might be well to pause here and comment on this recent trend in airline pilot industrial relations; that is, the wider participation in the negotiating process by ratification, whether it be MEC or membership. Contrary to what seems to be popular opinion on this subject, I am in complete agreement with this development and encourage its continued use. Coupled with a sound professional approach, ratification can only stimulate membership participation which is so vital to our activities. The initiative must not come from only a few knowledgeable individuals, however conscientious, but additionally from the broad-based pilot membership. The art of negotiation is no longer, indeed if it ever was, a completely antagonistic exercise, but rather, in its simplest terms, it is the getting together of two business enterprises for the purpose of formalizing a necessary working relationship.

The questionnaire is made up of the following four sections: —

1. Objective

This portion of the questionnaire provides the basic information used in the analysis of the following three subjective sections. Once the information from this part is tabulated and sorted into the following major categories — airline, base, age, years of service, status, equipment assignment, etc. — we are able to graph the results.

2. Subjective — what is possible — theoretical

This portion of the questionnaire makes available to the respondent 100 units of effort which he is requested to allocate among various sections of the agreement according to his personal preferences. It is intended that by providing the individual with sufficient freedom of choice and emphasis, a fairly clear set of priorities will emerge. These priorities, once established, make possible a further detailed analysis of the next section of the questionnaire.

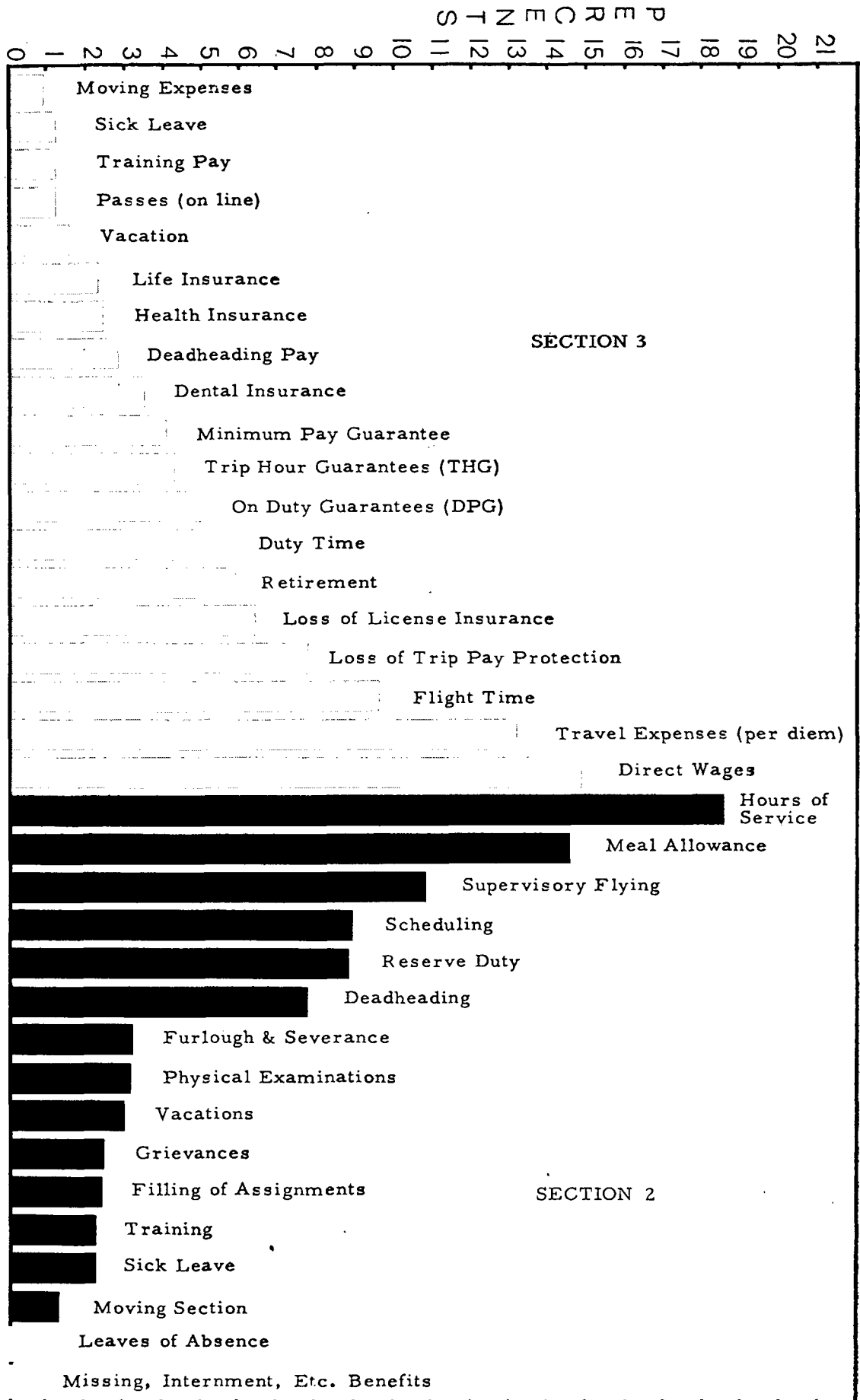
3. Subjective — what can be — probable

Assuming that there is a cost-limiting factor in the bargaining process, the respondent is provided with \$100.00 to allocate among various contract items which may be directly related to cost. The choices available in this portion of the questionnaire are designed to amplify the priorities that were established in Section 2, dealing with Units of Effort. In this section we hope to break down previously established priorities into specific areas of concern, weighing the individual subjects one against the other; for example, the high priority given to Hours of Service in Section 2 is now broken down in Section 3 into at least five sub-parts, (see graph).

4. Subjective — what is — essential

This portion of the questionnaire is intended to simulate an artificial crisis situation by asking the respondent to choose only one area in which contract improvement is **Essential**. The choices contained

RESULTS OF A RECENT SURVEY



: indicates the distribution, in percents, of dollars available
: indicates the distribution, in percents, of units of effort available

in this section are very similar to those offered in Section 2 — Units of Effort.

If the construction of the above format continues to prove effective, the respondent has now been brought through the stages of the bargaining process from the establishment of priorities through the evaluation and investigation of alternatives to the final decision-making process which concludes the Bargain.

In an effort to minimize the inherent dangers involved in analyzing preference surveys, we have consulted an industrial psychologist regarding the psychological impact of the format and the reliability of the analysis. At this point we feel satisfied that the obvious pitfalls are being avoided. Further, we are attempting to refine, what I believe to be, a significant aid to the bargaining

process, by requesting the assistance of the McGill Industrial Relations Centre to improve upon our initial effort.

The CALPA questionnaire has now been submitted to all five pilot groups represented by the Association. Four of these groups have completed negotiations subsequent to the analysis of the results. The correlation between the preferences expressed in the survey and contract improvements realized in each negotiation has been extremely high. Reissuing the questionnaire prior to the next round of negotiations should prove to be extremely valuable. A preference profile has been established for each pilot group. Monitoring the changes in this profile will assist our future negotiating committees in closing the "gap".



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Moscow Aviation Seminar



by Charles H. Simpson, President, CALPA

In September, I had the distinct honour and pleasure of representing CALPA at the First International Seminar on "Technological Progress in Civil Aviation and the Social Consequences for Civil Aviation Workers".

The Civil Aviation Workers Union of the USSR hosted this conference, and Captain A.D. Mills, IFALPA Deputy President, has reported on the meeting; I would like to recall some of the observations we were able to make as a result of the free discussion with the Aeroflot officials. The International Aviation Community welcomed the USSR into ICAO this past year and, hopefully, we may now hear more details of the world's largest airline.

Vladimir Zuev, President of the Civil Aviation Workers Union, and successor to Mr. Mishinkin, who visited Canada as CALPA's guest in 1966, delivered a detailed paper on the activities of Aeroflot and the Civil Aviation Workers Union, (500,000 members, including senior management).

This giant airline carried 75,000,000 people in 1970 and has forecast a passenger total of 500,000,000 in the next five-year period.

Civil aviation has not experienced any recession in the

USSR, and an extensive airport and terminal building program is continuing. More than 500 air terminal buildings and passenger service buildings, in addition to more than 100 hotels, have been completed in the past five years. It is well known that air transportation rates are comparatively cheaper than North American rates, and they anticipate building more than 200 local service airports in the next five years; the Yak-40 Tri-Jet will be the main feeder aircraft. It is interesting to note that this aircraft operates from grass runways for the most part, and Aeroflot officials admit that this reduces airport costs considerably.

CIVIL AVIATION WORKERS

Many of the thirty-four countries represented delivered papers on civil aviation or more specifically, civil aviation workers' progress within their respective countries. In consultation with BALPA, ALPA, DALPA (Dutch) and the Irish Pilots, it was not considered necessary to laud the progress of the working contracts within our respective airlines; our contracts are a matter of record and the comparative social status of the airline pilot in these countries indicates we have,

through adequate increases of wages, reduction of working hours and improved social security, made the professional pilot's life satisfying and rewarding as a career, if the sociological aspects are to be considered.

Many of the socialist representatives pointed out the improvements that have been made in their aviation industries and great stress was placed on the need for improved conditions and job protection as a result of modernization and technological advance. Workers in the U.S.S.R. have now achieved a five-day work-week and many of the countries particularly Rumania, Poland and the USSR placed great emphasis on the need for a manpower policy safeguarding the interest of the workers to ensure full employment. It was also gratifying that almost every country indicated studies were continuing regarding health protection and labour safety.

Poland, in giving its report to the Seminar, stressed the importance of proper rest for all workers and they have already established a scale that provides for additional rest periods if the work period exceeds eight hours. The retirement age for pilots in Poland is 60 and the pension to a pilot is 15%

higher than the average worker, recognizing the fact that he retires earlier. The Hungarian delegate, in reporting that a shorter work week for all aviation workers in Hungary will be established in 1972, further reported that pilots and controllers, due to the requirements of the job, are required to work less duty hours than other workers. (I thought a rather "capitalistic idea" by Poland was worthy of recognition by North American formula pilots — after 1,000,000 kilometers they are awarded a pay bonus of one month's pay!)

AVIATION MEDICINE IN THE USSR

The Seminar was addressed by the Director of Aviation Medicine on the second day, and he reported on the very extensive studies that are being conducted in the USSR on work-load, fatigue, time-zone flying and, more recently, SST problems including psychological examination, acceleration/deceleration tests, altitude changes and radiation sickness. The results of these studies will be made available to other countries, according to the Medical Director.

One of the major studies being undertaken by the Centre of Aviation Medicine, (established in 1968), is in cardiovascular research; a pilot cannot fly with a cardiovascular condition in the USSR, as in other countries. Nervous disorders and early diagnosis is also one of the major studies and they compile daily and monthly reports on disorders associated with flight crew, including stress and morale of the pilots. In 1971, a program of clinical observation of nervousness was initiated and CALPA asked if some of this information could be made available to Pilot Associations (the answer was a rather vague affirmative). It was interesting to note that the three major causes of pilot loss of license in the USSR are identical to North America: 1) Cardiovascular; 2) Intestinal, and; 3) Nervous Disorders.

Health and sanitation are stressed in Aeroflot aircraft. Great emphasis is placed on not only rest periods, but once a year a pilot is sent to a sanatorium or health centre, usually in the warmer part of the USSR, where he is literally given the opportunity to exercise and generally rejuvenate. I would like to suggest this would be a wonderful addition to the five CALPA contracts if we could negotiate an annual winter holiday in the Bahamas — it would be even more interesting upon our return to determine if our over-all health was notably improved.

PILOTS OF AEROFLOT

Russia is a country of contrasts and male and female workers do the same job. Although we saw many women working as stone-masons on the brick facing of the buildings in Red Square, we learned that Aeroflot has only three women pilots: one of them qualified as Captain on the IL-18.

Aeroflot's pilots, however, compare very favourably with our North American standards. We were not able to determine how many pilots Aeroflot employ, but the Company operates all civilian flying in the country including agricultural flying and much of the test flying of civilian types.

Aeroflot pilots are selected from high school or university applicants and are trained by flying schools throughout the country. The job is considered one of the most desirable, and one in twenty applications is accepted.

On the day following the Seminar, we were invited to a meeting at Sheremetievo Airport where an excellent exchange of questions and answers were provided by the pilots and navigators of Aeroflot, and the discussions continued throughout an excellent lunch. Some questions were simply left unanswered and others possibly lost something in the translation, but there is no doubt that the Aeroflot pilot compares favourably with the airline pilot

of the Western world.

Pilots fly up to 80 hours a month — often less, and are eligible for a month's holidays every six months, in addition to the State-paid annual visits to rest centres. It was pointed out that while flying personnel are accommodated free, their families are accommodated at reduced prices. (In 1970 alone, more than 30,000 civil aviation employees spent their leaves at rest centres.)

The crew complements are higher than the North American recognized crew complement, with many domestic flights having a navigator on board, and I.N.S. is used on all long-haul flights. The maximum duty day is planned not to exceed ten hours, but they appear to have a formula that allows for a crew to complete up to eight hours flying time.

The pay scale for a first-class pilot, as a captain is referred to in the USSR, is based on a formula. He receives a fixed pay, plus mileage pay, and averages 600 to 700 rubles per month (about \$750.). Considering that the average worker earns 200 to 400 rubles per month, and science or university teachers slightly higher, the Aeroflot captain enjoys one of the country's higher salary scales. It was interesting to find out that he pays approximately 6% income tax and has free medical, etc., consistent with most of the socialist-oriented countries. State apartments are provided at very low monthly rent, and this is where all people live, except for the workers in rural towns where private houses are available

President Zuev, in his address to the Seminar, outlined the new five-year plan, which has projected an increase in real income on a per capita basis of approximately 30%, and the State is attempting to provide the workers with a greater abundance of consumer goods; something that has been very much lacking in the USSR. This first International Seminar was an opportunity for free discussion among aviation workers representatives, and while it was recognized that our different

ideologies require different approaches, there was a distinct feeling of unity. The general declaration of the Seminar was difficult to draft because of our differing outlooks, but there was general agreement that we would have to continue to protect the aviation employee from redundancy, and adverse effects of the changing environment if we are to sustain social progress.

John David Lyon, Past President of CATCA, was the other Canadian representative to this Seminar, and we were both of the opinion, following our week-long visit, that the aviation fraternity of the USSR is making great progress in its liaison with the Western world and, of course, this has become particularly evident in the Civil Aviation Workers representation to IFALPA and IFATCA. Our Russian colleagues enthusiastically endorsed an IFALPA-sponsored motion in

Moscow regarding hijacking, and the final part of the motion reads:

"... urges all civil aviation workers organizations to give continuing consideration to this problem."

Although the differences are many, seminars as I have just described identify the similarities of our aviation workers throughout the world; pilots, controllers, flight attendants and ground employees alike.

The common aim is to make our industry a success and, naturally, to ensure that all the employees in civil aviation share in the success.

Russia is a great and fascinating country — Canada can learn much from the northern development of the USSR; CALPA can also learn from our Aeroflot colleagues, who very much want to exchange ideas, for a better civil aviation community.



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OWNERSHIP, RENEWAL PROVISIONS AND GUARANTEES

To Age 65:

UNAC guarantees that the Policy Owner shall have the right to maintain this policy in force by the timely payment of premiums in the guaranteed amount shown in the policy schedule until the premium due date following the Covered Person's 65th birthday, during which time UNAC further guarantees:

1. Policy cannot be cancelled;
2. Policy renewal cannot be refused providing premium is paid on or before due date or within the Grace Period;
3. Premium cannot be increased;
4. Benefits cannot be reduced nor can any restrictive rider be affixed as long as this policy continues in force;
5. Provisions of this policy cannot be changed;
6. Benefits cannot be reduced nor premium increased because of a change to a more hazardous occupation.

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→ Each renewal premium after age 65 shall be at UNAC's premiums then in effect for all persons of like age, sex, and occupation and benefits will be limited to the Maximum Benefit Period shown in the policy schedule or twenty-four months for each disability, whichever is the lesser.

POLICY SCHEDULE

Covered Person:	Date of Issue:	First Renewal Date:	Policy Number:
Policy Owner:	Annual Premium: \$	Premium: \$	Premium Mode:
Beneficiary:			
		ACCIDENT	SICKNESS
MONTHLY BENEFIT AMOUNT:		\$.....	\$.....
DEDUCTIBLE WAITING PERIOD:daysdays
MAXIMUM BENEFIT PERIOD:
ACCIDENTAL DEATH, DISMEMBERMENT, LOSS OF SIGHT BENEFIT		\$.....	

→ MAXIMUM BENEFIT PERIODS for disabilities beginning after the 64th birthday of the Covered Person shall be for 24 months or the stated Maximum Benefit Period, whichever is the lesser.

DEFINITIONS

COVERED PERSON is the person insured.

DEDUCTIBLE WAITING PERIOD means the number of days at the beginning of a period of disability for which monthly benefits are not payable.

INJURY as used herein means accidental bodily injury sustained and causing loss or disability beginning while this policy is in force.

PHYSICIAN as used herein means a legally-qualified physician other than the Covered Person or Policy Owner.

POLICY OWNER means that person so designated in the Policy Schedule upon whom all rights of this policy are conferred.

→ SICKNESS as used herein means disease or sickness which originates while this policy is in force and causes loss or disability while this policy is in force. For purpose of determining the origin date of a sickness UNAC will rely upon known physical symptoms or evidence known by the Covered Person, Policy Owner, the Covered Person's physician, nurse, or hospital.

→ TOTAL DISABILITY means that during the first seventy-two months of a continuous disability a Covered Person is considered totally disabled when he is unable to perform the duties of his own occupation. If a disability lasts longer than seventy-two months, a Covered Person is considered totally disabled thereafter if he is unable to perform any occupation or employment for wage or profit for which he is reasonably suited by education, training or experience.

UNAC, as used in the text of this policy, shall mean Underwriters National Assurance Company of Indianapolis, Indiana.

→ PREMIUM REFUND: In the event of accidental death of the Covered Person as described in the preceding paragraph, UNAC will, in addition to any other amount payable under this policy, refund all premiums that have been paid on this policy, including premiums for any additional benefit riders, since the date of issue of the policy or the effective date of the last reinstatement of this policy, whichever is the latter.

→ RECURRENT DISABILITIES: Successive periods of Total Disability will be considered as one period of Total Disability for the purpose of applying the Deductible Waiting Period and the Maximum Benefit Period unless —

- (1) the Covered Person has resumed a full-time occupation and performed all the important duties of that occupation for a continuous period of at least 4 months or longer, or . . .
- (2) the subsequent period of Total Disability results from causes which are unrelated to the causes of the prior period of Total Disability.

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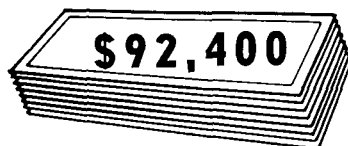
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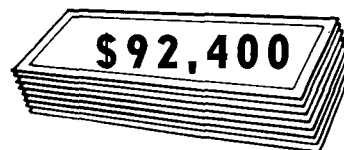
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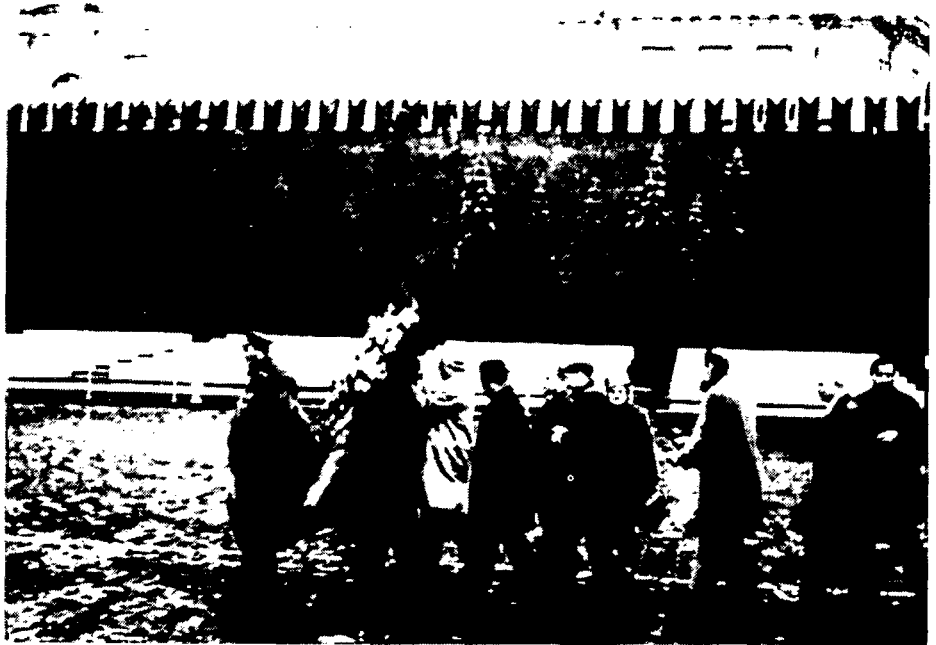


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A Nice Place to Visit

by Paula Simpson



It was a sunny day in September as we touched down at Sheremetievo Airport, Moscow, for a week's stay in the Soviet Union. My husband was to represent CALPA at the International Seminar of Civil Aviation Workers, hosted by the U.S.S.R.; thirty-four countries were to participate.

Emerging from the aircraft, we were greeted by a large sign, which read, "Welcome to the International Seminar of Civil Aviation Workers", and behind the sign by three people: the first was one of the organizers of the Seminar; the second, an interpreter; and the third, Mr. Rudy Hucl, Air Canada's representative in Moscow. We were whisked away by private bus to the terminal, where we were ushered to the V.I.P. lounge and asked to wait while our luggage was collected for us and our passports scrutinized. All of this took about fifteen minutes, at most, and then we were on our way again, this time to our hotel, the very comfortable Intourist in the heart of Moscow.

The ride from the Airport was interesting and took about 45 minutes. The countryside was so Canadian, that we had to keep reminding ourselves that we were in Russia; maple, birch, and fir trees

lined the route. We arrived at our hotel, checked in and were informed that lunch would be in half an hour. It turned out to be a pleasant and relaxing affair. From what I could gather, lunch is a more leisurely business in Russia than it is in Canada, and lasts between an hour and a half, to two hours, rather than our very hurried hour. Lunch consisted each day of four courses: fish, soup, meat and dessert. Whether everyone eats that way or not, I did not find out. After lunch the delegates returned to the Seminar (we had missed the opening session in the morning due to our travel connections), and the ladies (there were four wives in all), started out to explore the city. We walked to Red Square, which is five minutes from the hotel, and managed to arrive just in time to witness the changing of the guard at Lenin's Tomb. Red Square is impressive; red in Russian means beautiful, and it is truly that. Of course the 'red' in Red Square took on a different meaning after the Revolution. We walked about the Square in a leisurely manner, knowing that later in the week we would have a guided tour of the Square and an explanation of the various buildings and graves. Aside from

Above: A visit to Lenin's Tomb.

Below: Maggie Jacobsen, S & S Division, ALPA; in the background C. H. Simpson, CALPA and J. B. Lyons, CATCA.



Red Square, the Kremlin generally, and the beautiful subway, Moscow seems a rather grey city. A little bleaker than usual, perhaps, because of the almost constant rain at this time of year.

That evening we were bussed to the Vnukovo House of Culture to meet the Civil Aviation Workers of that area, and to attend a recital of Russian folk ballet and music. The eight-piece band played many jazz numbers and ended the evening with a rousing rendition of 'Hello Dolly'! Western music is very popular in the Soviet Union. Afterwards we were taken to the Airport for a dinner hosted by the Airport Commandant. Dinner was a feast, starting with what the Russians call Zakuska — a cold buffet of many varieties of meat, smoked fish, red and black caviar, cheese, salads and fresh vegetables, black bread, and of course, washed down with vodka. This most impressive first course (a meal in itself) was then removed and we were served soup and then our main course, which was 'Cutlets a la Kiev' — absolutely delicious! This was accompanied by excellent Russian wine, made in Georgia, and of course more vodka; then came dessert, coffee and more VODKA! This was only the first of many banquets to which we were to be treated during our visit. The Russians are truly perfect hosts; their warmth and generosity was shown in so many ways, not the least of which were the banquets which were prepared on our behalf.

Wednesday morning was spent sleeping (I was trying to catch up on 36 hours on-the-go from the time we left Canada); my husband was not so fortunate, his meeting began at 9 a.m. After another leisurely lunch, I ventured out to do a bit of shopping and general exploring. The shops proved to be a disappointment. There seems to be very little choice and things are quite expensive. There are special shops called "Beriozka" shops, or "Dollar shops", which are especially for tourists and deal only in foreign currency — no rubles allowed!



The prices there are quite a lot cheaper than in the regular stores, and I imagine this is done to encourage foreigners to spend their valuable currency. I found the prices to be anywhere from 20% to 45% less in the Beriozka shops; however, most of the goods are in the category of souvenirs.

Wednesday evening we attended the Moscow Circus, which was spectacular. The building in which the Circus is housed is an

Above: Mr. James Russell, BEA; Capt. Henry Danielsen, Norway ALPA; Capt. James Sherry, Irish ALPA; Nadya Pancheeva, Russian Interpreter; Capt. Peter Hofstede, Dutch ALPA; Capt. Fernando Garcia Velazquez, Mexico ALPA; and Capt. John Giberson, U.S., ALPA.

Below: Vladimir Zuev, President of the Civil Aviation Workers Union and host of the Seminar, with two senior Aeroflot Officials, at a luncheon given for the delegates.

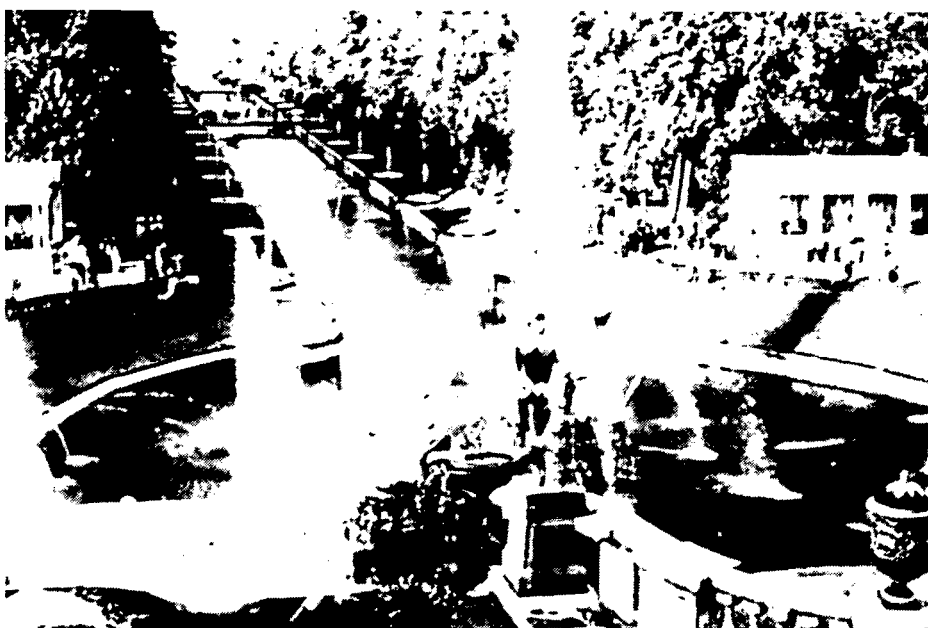
impressive structure. It is circular in shape, and is practically entirely glass — it is also a permanent building and the Circus is held there every evening.

Thursday we were invited to join the delegates to visit Lenin's Tomb and to lay a wreath on behalf of the Seminar. After the wreath was laid, we entered the Tomb where Lenin lies in state, and then were escorted to view the graves which lie between the Tomb and the wall of the Kremlin; the cosmonauts, among many other distinguished Russians are buried there. That evening there was another lavish reception in honour of the participants of the Seminar.

Friday, right after breakfast, we were divided into three groups; each group was taken to visit one of the three main airports, Sheremetievo, Domodedovo, and Vnukovo; our group went to Sheremetievo Airport. We were given information on the Airport, followed by a question and answer period, which proved to be quite enlightening. Pilot working conditions and salaries were discussed and compared at some length. This session was followed by a very sumptuous lunch, after which we made our way back to Moscow for an afternoon of sightseeing.

Friday night we all boarded the Red Arrow for an overnight trip to Leningrad, where we were to spend the weekend before making our way home. We had individual compartments with berths, and the train was very modern and comfortable — complete with bar.

Leningrad was certainly one of the highlights of our trip. The city itself is like a museum of art; around each corner is another beautiful treasure — buildings, fountains, statues all blend in perfect harmony, each complementing the other. The city is a little over two hundred years old and is built on the swamp delta of the Neva River. The river and its tributaries wind through the city, and there are more than three hundred and fifty bridges connecting one part with the other.



Our weekend was spent sightseeing and generally enjoying ourselves.

We arrived early Saturday morning, and were taken to our hotel, the very modern and comfortable Leningrad, for breakfast, before starting out on a bus tour of the city. The afternoon was left open for shopping and resting up for the opera, which we were to attend that evening.

The opera proved to be very enjoyable — "The Barber of

Above: The Hermitage Museum.

Below: Petrodvorets — Peter the Great's Summer Residence.



Seville", sung entirely in Russian. The opera house itself was actually the highlight of the evening. Very beautiful with its ornate crystal chandeliers, gold and cream coloured interior and rich velvet drapes and upholstery.

Sunday we visited the world-famous Hermitage Museum, which of course one needs about a month to see properly; we had two hours.

Captain David Mills, Deputy President of IFALPA, Captain Charles Simpson, President of CALPA and Captain Peter Hofstede, President of DALPA, in Leningrad, in front of a statue of Peter the Great.

This was originally Peter the Great's Winter Palace and it is truly magnificent. It's no wonder the peasants revolted! In the afternoon we were taken by hydrofoil to Petrodvoretz, the summer residence of Peter the Great. I don't think I have ever seen anything more beautiful!

The Russian people that I got to know the best were the interpreters assigned to our group, and they were wonderful. Warm, friendly and helpful — they are a glimpse of Russia that I will never forget. They extended themselves beyond their duty and showed kindness and thoughtfulness that will warm my memories whenever I recall our eight days in the Soviet Union. Nadya, Ivan, Valentina, Zoa and Valerie — thank you — you made our trip especially pleasurable.

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International Seminar on "Technological Progress in Civil Aviation and its Social Consequences for Civil Aviation Workers"

Moscow, 7-9 September, 1971.

**Report by Captain A.D. Mills:
Deputy President, IFALPA**

This Seminar was jointly convened by the Central Committee, Civil Aviation Workers Union, USSR; and the Trades Union International of Transport Workers (World Federation of Trade Unions). It was hosted by the Civil Aviation Workers Union, USSR.

There were 68 delegates from 34 countries, including 18 pilots from IFALPA Member Associations, 1 pilot from Interflug (German Democratic Republic), several IFATCA Members, and 1 International Labour Organization (USSR) representative. As a matter of interest and some significance, the countries represented could be categorised, according to current definitions, as follows: Socialist — 10; Capitalist — 18; Uncommitted — 6.

It was clear that our various political/ideological peculiarities were much too complicated to figure in our deliberations, so we proceeded to behave like a group of people collectively involved in Civil Aviation, and collectively concerned with mutual problems.

Of course, there were a few slogans and clichés, from all sides — the true Socialist cannot accept private ownership and profit: the Uncommitted cannot accept any form of Colonialism: and the pilot with his comparatively bourgeois lifestyle, cannot be persuaded that he is being

exploited, nor even that he is the exploiter. Generally, the current confrontations were made subordinate to constructive discussion, which may not necessarily please the more inflexible elements on all sides — but which was a matter of satisfaction to most of those present.

It became clear that the problems arising from technological development, in all parts of the Civil Aviation industry, are generally similar in all countries:

- Technical redundancy, and the requirement for retraining and replacement: the balance between job-security and the need for industrial efficiency.

- Increased work-loads versus decreased working hours: earlier retirement.

- Protection of real income.
- Job security versus health and social benefits, early retirement.
- The need to ensure that the benefits of technological advance are equitably reflected throughout the work-force.

IFALPA and its Member Associations have been working on these problems for years, with varying success — as evidenced by our Contract Summaries, and various National legislation in the social and technical fields.

The Seminar gave us a good chance to compare our methods and achievements with those of the other segments of our Industry. It appears there have been comparative gains, and that there exist comparative deficiencies, in what a

distinguished and venerable Canadian Senator once described as "the struggle to preserve the humanities in the face of the technological juggernaut". The Seminar agreed that "despite the different conceptions and national and international affiliations", Civil Aviation Unions and Associations can constructively work together, during meetings of this kind, and in collaborations at international Agency meetings (ILO, ICAO etc.) to ensure that the conditions of the people concerned keep up with the development of the machines concerned.

It was agreed that further meetings of this kind would be beneficial — but that the possibility of further meetings must be dependent upon the objectivity of the conclusions reached this gathering.

No politics — no propaganda, during the meeting or after the meeting.

Apart from a general declaration on the theme of the Seminar, a separate declaration was produced urging all organizations concerned to give continuing study to the threat of Hijacking and Sabotage.

The main work of the Seminar was handled in a "Commission of the Whole", with excellent multi-lingual simultaneous interpretation, and very efficient secretarial support. A "Presidium" was elected, which included Captain Forsberg, IFALPA President, and which acted as a steering Committee.

One evening the group we

000080

entertained by the Civil Aviation Workers of VNUKUVU Airport (Domestic) — a concert in the Palace of Culture, by Aeroflot Personnel, some of whom had flown in from KIEV: followed by a grand banquet hosted by the Commandant and his staff.

On the last day of the Seminar we were visited by the Vice-Minister of Civil Aviation (whom the writer had met at the Hague Diplomatic Conference last December), and senior officials of Aeroflot, plus the Director of Aviation Medicine. Among the interesting results of this exchange, we learned:

- * CAT II operations are not as yet being conducted in the USSR, but work in that direction and CAT III including auto-land and auto-take-off, is proceeding;

- * Aeroflot are experimenting with a 48-hour preconditioning period for crews on multi-time-zone operations, plus a "stay on home-base local time" approach to away-from-base stopovers — results would be available to us;

- * Aeroflot are **very** involved in aero-medical programs, and it appears, very advanced — a middle-aged IL-62 Captain, known to many of us, recently spent 28 days at the Aeroflot sanatorium in SOCHI, with his wife, at the Airlines expense, having a thorough medical check-up (there was nothing wrong with him), and getting thoroughly relaxed and exercised — this was

not his holiday, but an **assignment!**

Before leaving for a VIP-tourists weekend in Leningrad, we split into 3 groups, Flight Operations, ATC, and Ground Personnel. We pilots went to SHERMETIEVO (International), where we had a good "hangar-doors" session with Aeroflot Pilots and Navigators, and a very joyful lunch during which many outrageous tales of our various escapades were happily exchanged.

Leningrad was relaxation, and informal exchanges: by this time we knew each other, and some useful understandings were reached during visits to the treasure-house within the Winter Palace, among the spectacular fountains of the Summer Palace of Peter the Great, at the opera where we witnessed a Spanish-story-composed-by-an-Italian-and-sung-in-Russian, the Barber of Seville. We stayed in the soaring brand-new Hotel Leningrad overlooking the historic Cruiser AURORA, and a sweeping panorama of the NEVA river and the domes and columns of this beautiful Northern city.

We placed a wreath in the cemetery which holds the bodies of 650,000 civilians and soldiers who died during the 900 day siege during World War II; there are two other cemeteries in Leningrad with 600,000 more such victims. Our President, Ola Forsberg, had to leave early, due to commitments

elsewhere, and so it was my privilege to speak for IFALPA at the farewell dinner in Leningrad.

To speak of our congratulations to President Zuev, of the Civil Aviation Workers Union, and to Messrs. Ganguli and Brazay, of TUI for their initiative and foresight in convening this meeting: to express our thanks for the tremendous human kindness we had encountered during our stay: to describe our admiration of the secretarial and interpretation services — these people who had been our guides, philosophers and friends during this vivid week: to state that the real meaning of this meeting rested not so much with what we had spoken or written, but rather would rest with what we do when we got home — that if we keep faith with each other, and thus make further meetings possible, what we can achieve would be of benefit not only to people who work in Civil Aviation, but people everywhere.

Having visited the Soviet Union nine years ago, as President of CALPA, with the then-Deputy-President of IFALPA Jim Foy, this was a moving and exciting personal experience, for which I am deeply indebted to all concerned. It was good to meet again with some old friends, and to enjoy again the great-human qualities of the people of the USSR.



IN MEMORIAM

Senator Arthur W. Roebuck

On November 17th, Senator Arthur W. Roebuck passed away at the age of 93. Senator Roebuck was an Honorary Member of the Canadian Air Line Pilots Association and was Chairman of CALPA's Conciliation Board on the 1 in 4 grievance. The Senator was a legal advisor to several labour unions and on many occasions facilitated CALPA's representation to government offices in Ottawa.

One of the most active members of Canada's Upper House, he was noted for his eloquence and throughout his career he argued in favour of the rights of labour and against any form of discrimination. Canada has lost one of its most distinguished politicians, and CALPA, a loyal friend.

WILL YOUR HEART KILL YOU?

Very possibly. But it needn't

by Robert F. Legge

[Reprinted from "Executive" April 1971]

Some 2.5 million Canadians — almost one in 10 — suffer from some form of heart disease and many of them are to be found in corporations. The Toronto Dominion Bank predicted with dismay in a recent issue of its house organ that 1,300 of its 12,000 employees will become victims. How many of your employees face this bleak prospect? Indeed, will you be the one in 10? Robert F. Legge, a Toronto Writer who was a recent victim, charges the Canadian Medical Association deliberately ignores, or discredits when it feels it must, a simple therapy with the potential of saving approximately 50,000 Canadians annually. "The potential of this therapy has been demonstrated time and time again in laboratory studies and actual clinic practice around the world," he writes. For more on the therapy, what has happened to it, what it can do for you and what you can do to foster its use, read on.

Let me say at the outset that the Canadian medical profession saved the lives of several thousand people dying from heart disease last year. I know; I was one of them. And I am grateful to my family doctor, my cardiac specialists and the expert staffs of the cardiac intensive care units in two Toronto area hospitals. To them I owe the opportunity for my new lease on life and ironically, the opportunity to write this damnation of their establishment.

What angers me — and disturbs me more deeply than words can express — is the newly acquired knowledge that my close shave with death was so completely unnecessary. The prevention and

control of many fatal and disabling cardiac conditions have been within the scope of existing world-wide medical science for at least two decades. And many Canadian doctors, medical researchers in particular, know about the therapy, have heard lectures on it, and have had ample opportunity to read supporting clinical and laboratory reports from all over the world. Despite this, they have failed to accept it officially or prescribe it for their patients.

My fatal heart attacks can be prevented by a relatively simple therapy. Many disabling heart conditions can be controlled by the same simple treatment.

Last summer and fall, I was nearly one of those sobering mortality statistics that issue forth from the Canadian Federation and its provincial offspring:

"Heart disease kills more than 75,000 Canadians annually ... 40% of the men who die from heart disease are between the ages of 35 and 52... business executives have seven times more heart attacks than relaxed individuals. ..." I am one of the estimated 2.5 million-plus Canadians who today have some form of heart disease.

Much of this anguish, worry, grief and economic loss (\$200 million annually, claims the Ontario Heart Foundation) could have been prevented so very, very simply if the Canadian medical profession — the cardiac specialists; the heart surgeons; the department of health and welfare; the cardiac researchers; in short, the whole, awkward, towering, pompous, multi-million dollar cardiac hierarchy that exists in this country — had not been and weren't still so damned proud and stubborn.

You ought to be angry too if you've been scared witless with your first angina, if you've survived your first coronary thrombosis (myocardial infarct or what have you), if one of your close relatives, business associates or pals has been labelled a cardiac cripple, or if someone close to you didn't survive that sudden heart attack. For more than 20 years, many deaths and disabilities from cardiac disease have been unnecessary and the result of a lack of scientific objectivity in the Canadian medical hierarchy.

It is a fact that there is a biologically active substance readily available without prescription from most drug stores in metropolitan Canada that:

- (a) Is a superb anti-clotting agent in the blood stream that has never in thousands of trials exhibited the admittedly dangerous side effects of the anti-coagulant drugs generally prescribed by the medical profession. Thus, it can — and does — safely prevent the occurrence of coronary thrombosis;
- (b) Increases the ability of circulatory systems — especially the small arterioles and capillaries — to transport blood and its life-giving oxygen to heart muscles and, at the same time, decreases heart muscle's requirement for oxygen without impairing its proper functioning. Thus it prevents and/or relieves angina pains, and inhibits heart damage from coronary insufficiencies.
- (c) If a coronary thrombosis has occurred (as in my case), it can limit the extent of heart muscle damage; maintain the resulting scar in a soft, flexible, unshrunk or unpuckered condition; speed the recovery of the cardiac patient's heart to normal function and vitality; and inhibit the recurrence of another infarct or thrombosis;
- (d) If a thrombosis (blockage of an artery by a blood clot) or arterial constriction (narrowing of an artery) has occurred, assists — with exercise — the

body to open up new arterioles and capillaries that by-pass destroyed or constricted blood vessels, thus reestablishing a noticeably greater degree of circulation.

- (e) Improves the general strength, tone and function of artery walls, and relieves any tendency there may be for arterial spasm;
- (f) Strengthens heart muscles;
- (g) Regularizes pulse;
- (h) Normalizes blood pressure; and
- (i) Is completely non-toxic.

The foregoing claims are fully supported by more than 100 research papers and clinical reports published by medical researchers and physicians from around the world during the past 30 years. This apparent miracle substance is d-alpha-tocopherol, the most biologically active component of the vitamin E complex.

Vitamin E? I can hear the snorts of derision from here. "You mean the sex vitamin?" Yes, I mean the so-called sex vitamin. That's one of the hang-ups the medical profession has on the stuff.

Early experimental work with vitamin E gave evidence (valid) that it apparently increased the fertility of rats and humans. Every quack herbalist on the continent jumped on the bandwagon proclaiming it as an amazing aphrodisiac. Of course, it isn't an aphrodisiac; it merely enhances both the vitality of spermatozoa and ovum alike, allowing more of them to live long enough with vigor to effect pregnancies otherwise improbable. (Did I say merely?)

Naturally, the medical profession — austere and professionally sexless — was ethically offended by all the carnival hokum associated with the flamboyant quack advertising that flooded the country, and was quick to disassociate itself from all the sex malarkey. Thus further research on vitamin E's function in human metabolism was greatly discouraged. The words "vitamin E" appearing in the title of a clinical or laboratory report were apparently enough to make most medical practitioners and researchers blush with shame and

quickly turn to another page in their journal lest one of their peers accuse them of reading medical pornography.

That's just one element in the incredible tragedy of vitamin E's slow acceptance. Most of the medical hierarchy threw out the baby with the bath water and, in so doing, doomed millions to severely limiting disability and/or untimely death from cardiac disease. Most, but not all. A handful of researchers and physicians persisted with vitamin E studies.

First glimmerings

Slowly, medical science literature accumulated on other biological properties of vitamin E and its modes of action in human metabolism. The first glimmerings of this vitamin's function in the human circulatory system began to appear. One Canadian medical family that did read the vitamin E literature was the Shute family of London, Ont. — father and three sons, all members of the Canadian College of Physicians and Surgeons.

When the Shutes began to publish their findings on the therapeutic application of d-alpha-tocopherol to a variety of human ailments involving the circulatory system, they and their research were ignored, deplored and maligned by the Canadian — and American — Medical Associations. These medical prophets were long without honor on their own continent, much less in their own country.

But they persisted, worked, published and circulated their papers. Gradually, confirmation of and support for their experience and theories began to appear — a trickle in Canada and the U.S., more in England, a lot in western Europe, a flood in the Soviet bloc countries, and a deluge, of recent date, in Japan. Vitamin E symposiums began to happen, and now are being held with predictable regularity all over the world.

Dr. Evan V. Shute, elder of the Shute brothers, was recently elected a Fellow of the American College of Angiology, perhaps the first of

a well-earned, though much-belated, flood of medical honors due this remarkable family.

Dr. Wilfred Shute, now 63 and semi-retired to a Port Credit, Ont. practice limited to cardio-vascular disease, has during the past 30 years directly treated or supervised the treatment of an estimated 30,000 cardiac patients — possibly more than any other physician. Among those who have consulted him directly or indirectly are Lord Nuffield, president of the British Motor Corporation; Garfield Weston and a number of the world-wide Weston organization executives, including George Metcalfe of Loblaw's; Bruce Whitehead of Goodyear; Gordon Shipp of Shipp Corporation Ltd.; Joe J. Greene and a host of other executives, politicians, show people and ordinary everyday people from all over the world.

With all this, d-alpha-tocopheral and the Shute therapies in cardiac treatment have not been accepted officially by either the Canadian or American Medical Associations, much less practised or prescribed by the cardiac specialists of our land. In fact, the Ontario medical insurance plan does not recognize Dr. Wilfred Shute as a specialist and does not allow payment of the standard specialist's fees on behalf of his patients.

Why the foot dragging on this matter of life and death for millions? Why aren't these Canadian medical innovators heaped with official recognition and public honors? Why aren't they ranked with Banting, Best, Penfield and Selye? Above all, why isn't d-alpha-tocopheral the automatic prescription from any general practitioner or cardiac specialist who diagnoses angina pectoris, a myocardial infarct, or virtually any circulatory or coronary disease?

Ask any doctor or cardiac specialist. I have. Here is a list of comments that I and others of my acquaintance have received:

"A lot of the people who the Shutes claim responded favorably to vitamin E probably didn't have heart disease in the first

place — faulty diagnosis. Also, it has been shown that a simple placebo — a capsule or pill filled with some completely non-therapeutic substance like chalk dust or powdered sugar — relieves pain in about 40% of angina cases. Vitamin E seems harmless enough. If you think it will help you, try it. Maybe it will."

FACTS: In most cases, victims of heart disease reach the Shutes after passing through the hands of a general practitioner and one or more heart specialists. Often the Shute therapies have been sought as a kind of desperate last chance. If the diagnosis in these cases is faulty, it is a diagnostic error that must be shared by more than just the Shutes.

The inference that the effectiveness of vitamin E is no more or less than can be expected from taking placebos was demolished statistically long ago. In proper dosages, favorable response to d-alpha-tocopheral is demonstrated in more than 90% of the heart conditions for which the Shutes recommend its use.

"Oh, the Shutes. They were the chaps given a big old house by some wealthy man many years ago in London, Ont. and they set up some kind of an institute or other, based on vitamin E, but I wouldn't pay too much attention to them if I were you."

FACTS: The Shutes purchased a large old London home, in which no one else was interested, from the Smallman estate. There they established the Shute Institute.

"Those boys"

"Oh, you're onto the Shutes and that vitamin E stuff, eh! Well those boys cornered the market on that stuff and they've made a fortune out of promoting and selling vitamin E pills."

FACTS: Doctors Evan and Wilfred Shute were paid relatively modest incomes from the Shute Foundation, recipient of all fees from the Shute Institute. Neither they personally nor the institute own

any shares or have any financial interest in any pharmaceutical manufacturing organization. Other Shute Foundation funds are applied to continuing vitamin E research and to the distribution of medical literature on vitamin E therapies for a variety of ailments.

"Well, it can't hurt you, but I tried it on my own mother who had a severe angina condition and it didn't do her any good."

FACTS: Vitamin E can be prepared from a natural food source by distilling wheat germ oil or by manufacturing it synthetically. It is a complex consisting of a family of seven related but subtly different substances called tocopherols. Research has shown that only one of these — alpha-tocopherol — demonstrates all the biological properties I have described.

Two sources

Further, there is a distinct difference between alpha-tocopherols derived from natural and synthetic sources. The synthesized substance is an optically left-handed molecule identified by the prefix "l" (for levorotatory) — thus l-alpha-tocopherol. The "natural" substance, an optically right-handed molecule, is five times more biologically potent than the synthetic and is identified by the prefix "d" (for dextro rotatory) — thus d-alpha-tocopherol.

Confusing? It gets worse. Vitamin E is dispensed in units of measurement called International Units (I.U.'s) and this international standard does not differentiate between the complex of seven tocopherols, and/or naturally and synthetically derived tocopherols and/or d-alpha or l-alpha content. Thus, the contents of several different brands of vitamin E supplements — all legally labelled 100 I.U. per capsule — can vary widely in their biological effectiveness.

Dr. David Turner, the brilliant Canadian biochemist whose nutritional research studies for NASA resulted in vitamin E supplements in the diet of the American

astronauts, told me that he recently performed highly accurate gas/liquid chromatographic analyses on all brands of vitamin E supplements sold in Toronto drug stores. He found that some brands contained as little as 10-15% of the biological potency (equivalent of d-alpha-tocopherol) that the number of International Units indicated on the label would lead you — or your physician — to expect.

With all this confusion in the background — surprisingly unknown to most physicians, including cardiac specialists — is it any wonder that some doctors, trying to replicate the recommended Shute therapeutic dosages, have experienced "spotty" results? Generally speaking, negative results reported in the medical literature result from the administration of too low a dosage of the most biologically desirable vitamin E constituent, d-alpha-tocopherol, or it has been administered for too short a time.

The Shutes have always stressed the importance of large enough dosage in cardiac therapy. Half the dosage doesn't give half the result; it most often gives none. For more than 20 years, W. J. Gutterson, president of Webber Pharmaceuticals Ltd. of Rexdale, Ont., has supplied the Shutes and other researchers with d-alpha-tocopherol. It is not surprising to learn from Dr. David Turner that only the Webber brand of Vitamin E supplements were within the permissible range of biological potency indicated by the I.U. ratings on their labels.

"Proper dosage and proper product" has been the Shutes' caution to their fellow physicians for years.

"Vitamin E? I suppose it's important, but you get enough of it in the foods you eat."

FACTS: Most of us don't. It is conceivable that some "food nuts" get enough by eating abnormal quantities of wheat germ, stone ground wheat flour breads, leafy green vegetables, etc., and drinking wheat germ oil by the barrel. As with so many other essential vitamins and minerals, food refining,

processing and distribution techniques used increasingly since the 1900s have eliminated most natural sources of vitamin E from our diets. A growing number of medical biochemists and other researchers now share the Shutes' opinion that the logarithmic increase of coronary heart disease to its present truly epidemic stage in all "developed" countries since the first post-mortem disclosures of deaths due to coronary thrombosis in the early 1900s is a strong indication of dietary vitamin E deficiency on a global scale.

Therapeutic dosage

As far as "therapeutic" dosages are concerned, Dr. Wilfred Shute prescribed 1600 I.U.'s per day for my post myocardial infarct therapy. The richest source of d-alpha-tocopherol is wheat germ oil. I would have to drink 80 cups of wheat germ oil each day in order to get the same amount of d-alpha-tocopherol into my system as that provided by two small capsules.

A close relative, stimulated by my "discovery" of vitamin E, thought she'd look into it via the Ontario Heart Foundation. The field coordinator for the OHF Kitchener/Waterloo chapter knew nothing but wrote to the headquarters of the Canadian Heart Foundation for information. Her reply reads as follows:

"All I know about Dr. Shute and the Vitamin E Society (?) is that it is run by two brothers and their address is Vitamin 'E' Society, Box 1106, Postal Station 'D,' Toronto 9, Ontario. The consensus seems to be that it is a 'kick' and nothing else." (The question mark is mine.)

Don't bother to write. The "Vitamin E Society" was an unsuccessful attempt by an enthusiastic but amateurish group of Shute patients to bring both the vitamin and Shute therapies to the attention of the public. It closed up shop, deeply discouraged with the medical establishment some years ago.

The comment — "The consensus seems to be that it is a 'kick' and nothing else" — is unfortunately

true and most disconcerting coming from a fund-raising organization whose sole reason for existence is financial support (last year \$3,000,000) for research into the causes and cures of heart disease.

Hundreds of Canadian business executives support this fund and lend it their organizational skills. How bloody ironic the whole scene is. Picture a harassed executive — maybe yourself — literally working his heart out, putting his money and his spare time behind this organization.

Business support

For what purpose? He hopes that the fantastically expensive cardiac research empire he helps support may some day find a cure for angina pectoris or a means to a long productive life for the man who has had or is about to have a coronary thrombosis. And all the time — all these years — he has placed his faith and confidence in a clique of physician consultants to the foundation who have obfuscated the most important facts that count in this deadly serious matter.

And those facts once again are these: Heart disease has been largely conquered. Alpha-tocopherol in appropriate dosages has been proven to eliminate the problem of angina, to prevent clot formation in arteries without danger, to promote the rapid healing of hearts damaged by infarcts, to normalise blood pressure and pulse — to strengthen heart muscles and capillary walls, and to enhance both primary and collateral circulation — in most cardiac patients.

Are these shocking implications getting through to you? Aren't you offended that the Canadian heart disease establishment continues to throw good money after bad searching for answers that Canadian medical researchers found and shared with them years ago? Aren't you offended that cardiologists of national repute continue to suppress information about d-alpha-tocopherol cardiac therapy, and cast aspersions on its Canadian pioneers, the Shutes?

In 1969, Dr. Wilfred E. Shute's new book — "Vitamin E for Ailing and Healthy Hearts," published by Pyramid House, New York — was offered for sale in the book departments of both Eaton's and Simpson's downtown Toronto stores, although it was later removed from display at Simpson's.

Read the book

Dr. Shute's book is a runaway medical best-seller. From its pages, any general practitioner — your general practitioner — can acquire enough information to treat most of his cardiac patients himself without reference to "a specialist" — and with immeasurably greater success.

Here is a call-to-arms. Let's give the Canadian medical profession a shaking-up that's long overdue. And here's how:

- 1) Read Dr. Shute's new book yourself.
- 2) If you're a member of a hospital board, raise the subject firmly and insist on an answer from the head of the cardiology department. Be persistent and don't fall for the old malarkey that you've stepped out of line for a layman.
- 3) If you're an active supporter of one or another of the heart foundations, insist that the foundation (a) examine the vast supporting medical literature now available on d-alpha-tocopherol; and (b) support a massive information campaign directed to both the medical profession and the public on d-alpha-tocopherol therapy instead of pouring more of its funds down redundant lines of research.
- 4) Buy an extra copy of Dr. Shute's book, take it — don't send it — to your family doctor, and insist that he read it. If he balks, remind him that coronary deaths are on the increase, that the medical profession itself is one of the hardest hit, and that the first life he saves by reading the book may well be his own.

Is cholesterol such a villain?

The most popular weight control diet among business executives during the past decade is known by a variety of names such as The Air Force Diet, The Low Carbohydrate Diet, The Drinking Man's Diet, The No-Sugar-No-Starch Diet, and, a variation — the egg and grapefruit juice diet. The basic characteristics of this diet are: the virtual elimination from the diet of candies, sugar sweetened soft drinks, fruits, root vegetables, beans and peas, pies, cakes, puddings, flour and starch gravies; and unlimited access to eggs, cheese, butter and other fats, meat, poultry, fish, and alcohol; plus a good daily multiple vitamin/mineral supplement and an extra 100 mg of vitamin C to make up for the nutrition lost by the elimination of fruits and vegetables.

As far as losing weight, the diet works. I know. Seven years ago, it helped bring my weight down from 202 pounds to 150-160 pounds in four months without a hungry or uncomfortable moment. I was then, at age 38, in apparently excellent health and, with no history of heart disease in my family tree, defending myself (or so I thought) against future heart disease. My doctor, who agreed with my dieting — plus exercise — cautioned however that my increased intake of hard animal fats and high cholesterol foods (eggs) could lead to heart disease by increasing the cholesterol and fat levels in my blood stream. To counteract this, it was recommended that I add the equivalent of a quarter cup of polyunsaturated corn oil daily to my diet in the form of salad dressings, corn oil margarine, and corn oil for cooking.

This principle — that increased

intake of polyunsaturated oils can control, even reduce blood cholesterol levels — proved, in my case, to work. My blood analyses do not show abnormal cholesterol or serum fat (lipids) levels, despite what I know to have been an abnormally high fat and cholesterol intake. Nevertheless, in August last year, increasingly severe heartburn was unmistakably diagnosed as angina pectoris and I was sent — in an ambulance — from my doctor's office to the cardiac intensive care ward at a local hospital. And in October, as my doctor put it, "You went all the way this time" with a full-fledged coronary thrombosis — identified by one of Toronto's leading cardiac specialists as a "severe myocardial infarct."

"What went wrong?" I asked my doctor, three other general practitioners, two cardiac specialist interns, and two well-known Toronto area cardiac specialists. "Why am I here? I've done everything according to the book. Was it my diet?"

The one new thing the specialists told me was that re-evaluation of old research and new research on the relationship of blood cholesterol and lipid serum levels to the incidence of heart disease had cast serious doubt on cholesterol's role as villain in the tragedy.

Beyond that they only speculated that is was, possibly, some genetic weakness just showing up now under abnormal business and domestic stress. At no time did they suggest there was any relationship between my seven-year low carbohydrate supplement (corn oil), exercise regimen and my heart condition, despite the fact that I felt there

(Cont'd. on page 35)

Report on British Columbia Aviation Council Annual Meeting

September 24 and 25, 1971

by Norman Hoyer
Western Representative, CALPA.

The theme of this year's meeting was 'Aviation — The Next 100 Years'. There are two general comments on this theme — first, it was obviously much too long a period to project. This became apparent as most speakers evaded the theme completely or at best restricted their comments to ten, twenty or thirty years ahead. It was also notable that there was little emphasis on major technological break through; this was a marked change from similar meetings of ten or fifteen years ago. There was little reference to the SST and none to rockets and other far-out concepts. While most people conceded that aircraft would become larger, it was not foreseen that they would be significantly different from the present generation of wide-bodied Jets. Emphasis was primarily on the effects of present and future large aircraft on people and facilities. No doubt this is a reflection of the growing concern that it is time to re-value technology with more emphasis on people and environment.

The other noticeable feature was that in spite of this being a general aviation meeting with most delegates representing business flying, recreation flying, training, etc., the papers presented, and discussion, tended to be based

largely on air transport and related matters, such as airports, communications and even baggage handling.

Paul St. Pierre, M.P. (West Coast Chilcotin) talked primarily of flying the airlines from a customer's point of view. He believes that passengers are primarily interested in economical and safe transportation, and suggested that airlines should get away from standard tariffs and reduce fares by curtailing advertising and spending less on frills, such as stewardess's uniforms, fancy food, etc. He is a very strong opponent of the SST and advised that he would again introduce a bill in the House, which would prohibit the SST being flown over Canada. He stated that the object of the bill was to prevent Canadian airlines from acquiring any SST equipment.

The Committee reports dealt primarily with general aviation matters. The principal speaker for the banquet was Professor Chaytor Mason, from the University of Southern California. His subject — 'Human Factors in the next Century'. A Psychologist and ex-Marine Corp Pilot, Prof. Mason operates a Safety Clinic at the University, which emphasizes the man-machine relationship. He is a very dynamic personality, which enabled him to put over a difficult proposal, i.e. we should re-examine our concepts of manhood, because the present concepts conflict with

good safety practices (I note he has also written SFB #28 'Manhood versus Safety' along the same lines). If the Association has not already heard Prof. Mason, he is worth considering for an annual meeting or safety forum.

The panel discussion on 'Aviation — the Next 100 Years' (led by Captain Doug Nassey CP Air) covered a variety of topics, including facilities, aviation medicine, and communications. In regard to airport facilities, the major problem foreseen is at the interface between airport and the surrounding community i.e. getting people, baggage and freight from the city and surrounding area, into the airport and onto the air carriers. Dr. Carrol, from Air Canada, spoke on aviation medicine and predicted more flexible medical standards, using a lower standard base and specialist augmentation.

Mr. W. B. Leithead, an Architect, suggested that airport buildings should not be designed to meet a particular projected requirement, but should be deliberately designed for flexibility, so they could be modified every few years to meet changing requirements. He foresaw future buildings with a relatively static main core, but extremities directly connected to aircraft designed for easy adoption every few years.

Mr. W. K. Newton, Regional Superintendent of Design and Construction of Electronic Facilities

in the local M.O.T. Office, gave a paper on communications in the next 100 years, which I think would be of interest to many of our pilots.

In general it is my impression that membership in the B.C. Aviation Council and attendance at their meetings is a very worthwhile means of keeping in touch with other segments of aviation in the community and picking up information which may be useful to our membership.



IN THE AIR

It is to be hoped that we hear more noises along the lines of those made by Norman Tebbit, M. P., when he raised the question of pilots' duty periods in the House of Commons. On this privileged occasion he was able to relate his own experiences of pilots falling asleep on the flight deck as a result of excessive fatigue.

It really is absurd that our regulating authority refuses to take a firmer stand against the commercial pressure of the operators. Until there is another serious accident resulting from pilot fatigue, they will presumably allow the present legislation to continue in force without the urgent amendments which are required. It is of no use for them to say that they produce only 'guidelines' and that the responsibility rests with the operators. It is up to the Department to produce hard and fast rules and insist on their implementation.

The most outstanding anomaly is that the legal limits make no distinction between night and day departures. They assume that a crew can take-off at 2200 hours, just as fit and rested as if they left at 1000 hours. One wonders if any of those concerned has ever experienced such a departure. No wonder pilots are cynically amused when our legislators attend an all-night sitting and then moan because their legislative powers are impaired. The only physical act they undertake in these circumstances is to make their way to the voting lobbies. Have they (except Norman Tebbit!) any conception of the mental and physical performance required at the end of an overnight flight to propel a heap of airborne flesh and metal back on to the ground in one piece?

I make no apology for a touch of histrionics. It is time that it was

said. In so many cases it is no less than a miracle that sufficient adrenalin is pumped around the pilots system so that the operation is accomplished safely. But at what cost to the bodies of those pilots?

Time zone changes are another factor, for which no account is taken in the 'guide lines'. Business men have been warned not to take decisions after a lengthy flight across time zones until they have had at least 48 hours rest, and their body cycles have been able to catch up with local time. How about the pilots? BOAC pilots will tell you of the three days spent recovering from a return from the Antipodes in 4 or 5 days, when they are useless to man or beast! So what of their performance en route?

No account is taken of **cumulative** effects of fatigue. The companies (and the civil servants) act upon the advice of management pilots, who are not subjected to the constant exposure of route flying. They can express an honest opinion that a particular schedule is viable and will not result in excessive fatigue; but this will be based upon the basis of an isolated flight, and not in the context of a regular pattern of route flying.

With few exceptions, pilots are conscientious and make every effort to rest before a flight. They are as fit as they can be before undertaking their duties—after all, their necks are involved as well as the passengers'. Even so, some of the factors involved (and I have mentioned only three!) can result in their being tired and well past the peak of their performance before their duty is completed.

Do we have to get more pilots elected as Members of Parliament before some realistic, and safe, flight time limitations are produced?

AERIUS
(Reprinted from the Log, Aug. 1971).

Communications

The Next 100 Years

by W. K. Newton, M.O.T.

Radio communications, like aviation, is a very young science. The first radio communication was carried out by Guglielmo Marconi in 1895 who, using "Wireless Telegraphy", sent a message across the Atlantic Ocean. So looking back these few years, we can review the advances that have been made to date and marvel at the complex systems now available and which we take so much for granted.

No doubt if Marconi and his associates in 1895 had been asked to predict the state of the art in 1971, it would have defied their combined imaginations. I find myself in the same boat today but, after some study of the current activities of the research people and calling upon a background of many years of faithful reading of "Buck Rogers" and "Flash Gordon", I will attempt to discuss what may happen in the next 100 years.

While the subject assigned to me for today's discussion was "Communications for the Next 100 Years", I intend to include navigation as well, for in aviation they go hand in hand.

Some of the systems in use or coming into use today will be with us for a good part of the next 100 years. Peripheral facilities, satellites and mini-computers will play a great role in the future.

To start with communications, the present practice of using peripheral communication facilities (PAL) will be expanded and become more sophisticated over the years. Data links will be installed at peripheral sites and at navigational aids sites, which will allow two-way transmission of ATC DATA and other vital

information with minimum effort and participation by the pilot by pushing one or two buttons or by inserting a punched card coded messages could be sent to a central computer at the ACC and answers could be obtained almost instantly. Routine information, position reporting etc., could be communicated rapidly and efficiently.

Flight plans will be put on a punch card and inserted into the computer before take off. Portions of flight plan data would be automatically included in any message sent from the aircraft to the central computer.

Miniaturized teletypes are now available for mobile use and are in use by police forces in some areas. These small teletypes will probably be used as the readout for the aircraft's computer and the main ACC computer. This means that a hard copy of important messages is available to the flight crew.

Today the emphasis is toward world communication and navigation systems. This requirement will eventually be met by the use of satellites but will start with more conventional means first.

Area navigation will be the first step in a world-wide system and will be available to the larger aircraft at the beginning because of the size and cost of the equipment but will eventually be available to all aircraft.

The Doppler Navigators and Inertial Navigation equipment presently used, are a form of area navigation as they allow any track to be followed irrespective of ground based facilities. Most area navigation systems as visualized, require an airborne computer and it will be some time before the

size and cost of computers are within reach of the smaller aircraft operator.

The present planning indicates the first area navigation system for continental use, using ground based aids, will make use of VOR, DME and TACAN installations. Designers are busy now improving the performance of these facilities, both the ground equipment and the airborne receivers. The airborne computer makes the required calculations which allows the pilot to navigate along any desired route within the coverage of ground station-referenced signals. It is expected that VORTAC stations, as a ground reference, will be used for the next ten years at least.

For long-range area navigation using ground referenced signals, the present Loran A, Loran C and Decca chains will continue to be used for some time. Omega, a world-wide navigation system, will be available by late 1973. Omega is a hyperbolic navigation system similar to Loran and Decca but operates in the Very Low Frequency (VLF) part of the radio spectrum (10—14 kHz). Eight Omega stations can provide world-wide position coverage. A new Omega aircraft receiver has been developed which includes a computer to perform the necessary computations and provides a readout of position in latitude and longitude, distance to go and lateral track error. It will easily interface with gyro, airspeed, inertial, doppler and other aids. It is predicted that Omega will demonstrate a navigational capability in excess of any now available. The Omega system will probably be with us for a good part of the next 100 years.

The ultimate in world-wide

communication and navigation will be accomplished by the use of synchronous satellites. Experiments have been done with satellites using communication frequencies in different parts of the radio spectrum. Tests have been made with VHF and L-Band satellites and the results are being evaluated. When the best type of satellite has been determined, then a system of such satellites will be put into orbit and the flyer will have the greatest tool for communication that he has ever had.

The satellite from its lofty perch of several thousands of miles up will be able to send and receive signals into practically every nook and cranny of the earth's surface thereby eliminating most of the blind spots which plague our present communication systems.

All aircraft will be equipped with a sub-miniature computer and the Area Control Centers, fewer in number, will be equipped with large capacity computers.

Landing Aids:

The Instrument Landing Systems of today will be replaced with micro-wave ILS which will operate effectively in situations, which make operation impossible today.

Microwave ILS will:

- provide a high integrity signal which is insensitive to a physically dense airport environment.
- provide approach and landing service at airports where siting restrictions now preclude the use of ILS.
- provide low costs versions for use at low density airports.
- provide service to V/STOL aircraft.
- permit all weather operations (true zero ceiling and visibility).

The aircraft even when fitted with the new microwave ILS receivers will carry other back-up equipment.

Aircraft will probably carry

an Independent Landing Monitor in the form of a short range, high definition, mapping radar. This radar would allow the pilot to monitor runway alignment during approach touch down and roll out phases of CAT. II and CAT. III operation. It would also inform him of runway obstacles, and assist in taxiing and take-offs in low visibility.

To reduce noise from jet aircraft in the approach to an airport a Glide Path computer for let-down guidance is being designed. This computer would allow a steeper descent of 3° - 6° to start 4 or 5 miles sooner with the computer output showing on the cross-pointer instrument. A two-segment or a single-segment G. P. approach is possible. In the two-segment approach the computer would give cross-pointer indication until interception with the normal glide path at which time the computer would disconnect and guidance signals would be from the standard glide path. For a single-segment approach the computer would provide vertical guidance for the whole of the approach path.

A trip for a pilot of the future will probably go something like this:

The flight plan will be recorded on a punch card or some other device for programming the aircraft computer.

The computer would, on command, start the engines and do all cockpit and safety checks and a ready for take-off light would inform the captain.

The flight plan card would be inserted and the plan would be recorded in the ACC computer and approval given.

The push of a button would get the computer to request taxi and take-off clearance.

In poor visibility the main computer would, at request, produce a picture of the airport on a T.V. type screen in the cockpit showing the aircraft position and positions of other aircraft and vehicles on the airport.

Once airborne the position fixes from the satellite will be displayed in the cockpit in digital form. The computer will calculate the course to be flown and feed this information to the auto-pilot.

The central computer will interrogate the aircraft at frequent intervals and the aircraft location will be automatically displayed in the ACC. The ACC computer will transmit a map of the area which is being flown over.

This map will appear on the screen in the cockpit, showing the aircraft's position and the position of any traffic within a desired range to provide Collision Avoidance information. In the event of a lost aircraft, its last position would be known to within one minute or less in time.

During the flight, upon request, the central computer will transmit a weather map of the area being flown over, and this map will appear on the same screen.

If the aircraft drifts off track beyond a preset distance both the captain and the ACC are made aware and corrective action is initiated. The computer would monitor all aircraft functions and notify the captain and ACC of any malfunction. Upon reaching the destination an approach program card for that particular airport is inserted in the computer and the computer with information from the satellite and/or ground based aids directs the aircraft into the proper procedure for landing.

The landing could be computer controlled or manual controlled at the discretion of the captain. After parking the aircraft the flight plan card would have to be removed before the engines could be shut-down.

The removal of this card would automatically signal the ACC that the flight plan was closed. As a back-up to the satellite

system ATC would have 3D high definition radar at all major terminals and other strategic points.

All aircraft will be equipped with transponders and will be equipped with some on-board area navigation facilities such as an Inertial Navigation System.

This has been a brief look at some of the thinking for Avionics of the future. Every major country in the world is devoting considerable brain power and money into the development of

electronic equipment to improve communication and navigation and to perform other functions required by modern aviation.

While I have predicted these developments over the next hundred years, it is quite conceivable that they could take place in half that time.

Anyone who strongly disagrees with this presentation, I would be happy to meet you here to discuss it, one hundred years from now, that is provided you're buying the drinks!

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(Cont'd. from page 30)

was a connection and made my concern abundantly clear.

While convalescing from my coronary in a Toronto hospital, Dr. Wilfred E. Shute's book, "Vitamin E for Ailing & Healthy Hearts" was brought to my attention by a family friend. In his introduction, Dr. Shute convincingly related the increased incidence of coronary thrombosis since the beginning of this century to wide-spread dietary deficiencies of vitamin E rather than to increased business stress and/or the increased intake of hard animal fats.

In chapter 3, "Angina of Coronary Occlusion," I read: "...The consumption of polyunsaturated fats reduces the serum level of vitamin E and increases the likelihood of vitamin E deficiency..."

and I began to get excited. In chapter 6, I read: "...Uncontrolled, unthinking increase of polyunsaturated fats in the human diet may well increase the incidence of coronary heart disease in patients and have an adverse effect in all other types of heart disease! ..." In chapter 12, I read: "...These women and their physicians ought to know that, just as every patient whose doctor has put him on a polyunsaturated fat diet needs increased vitamin E, so does the woman who takes the pill."

Warning & moral

I got the message. For the first time, someone — Dr. Wilfred E. Shute — was able to tell me

exactly why I had contracted heart disease — age 44. No one will know how close one young embryo cardiac specialist came to getting thrown out of a third floor convalescent hospital window when, a few days later, he made a deprecating statement about Drs. Wilfred and Evan Shute and the fact that I was reading Dr. Shute's book.

The warning and the moral are one: if you are reducing or controlling your weight with a high protein diet, for sheer survival's sake read my accompanying article, lay off the polyunsaturates, and browbeat your doctor into a vitamin E therapy a la Drs. Evan and Wilfred Shute.

[Reprinted from "Executive" April 1971]

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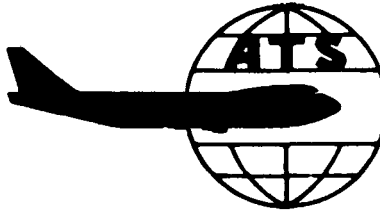
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IF SOMETHING UNEXPECTED TURNS UP, WHO DO YOU TURN TO? We really hope you're as dull today, to your

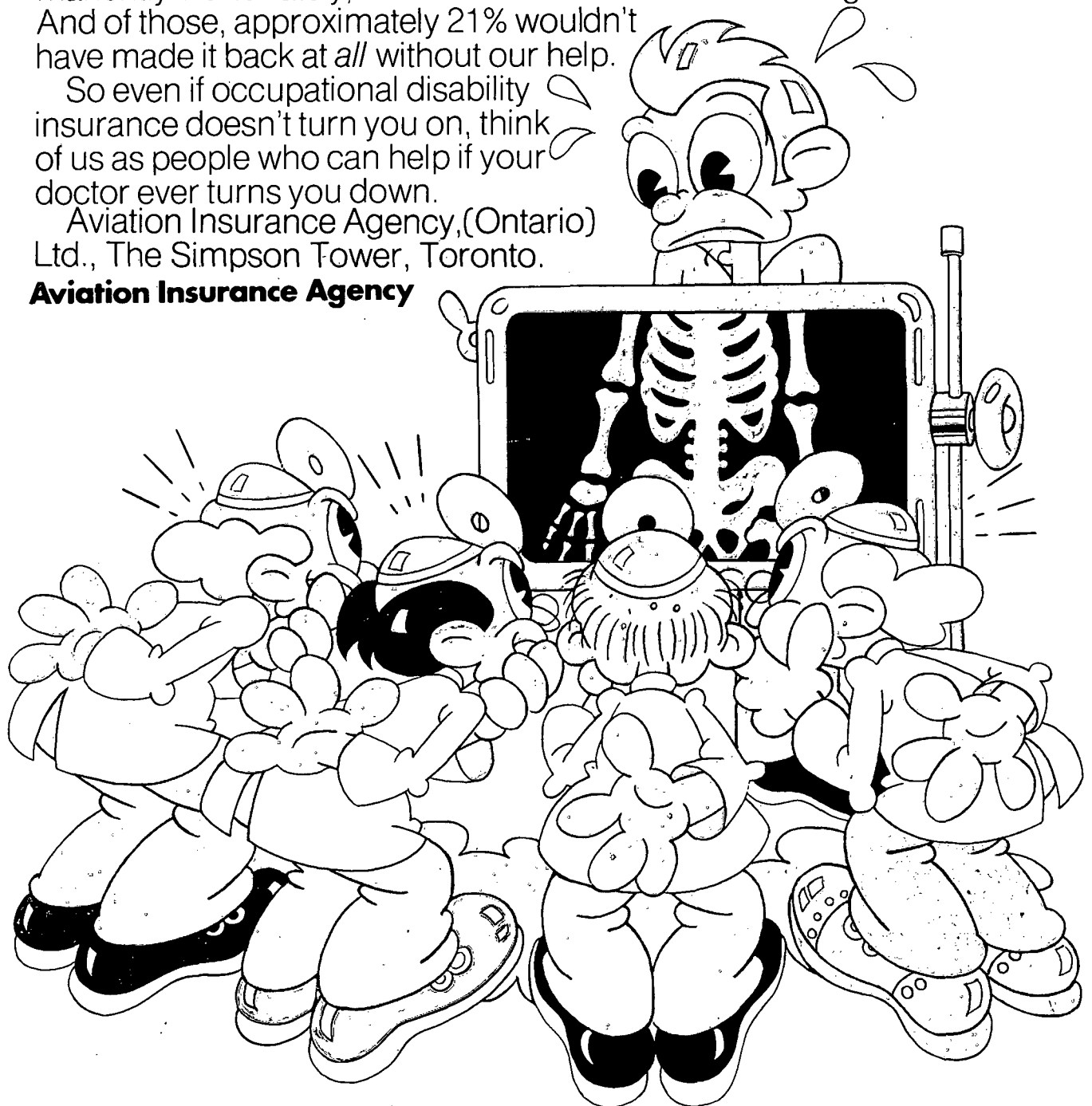
YOU TURN TO? We really hope you're as dull today, to your own doctor and the rest of the aerospace medical profession, as you were yesterday. But if something weird ever *does* happen that suddenly holds you down, we hope you're insured by us. Because getting pilots back on flight status is as vital to us as insuring pilots against the things that get them *off* flight status in the first place.

That's why we have a full-time Medical Director—an aerospace specialist. Last year, 1.3% of the professional pilots we insure faced disability problems potentially serious enough to ground them. Permanently. Fortunately, 38.3% of them were returned to flight status. And of those, approximately 21% wouldn't have made it back at *all* without our help.

So even if occupational disability insurance doesn't turn you on, think of us as people who can help if your doctor ever turns you down.

Aviation Insurance Agency, (Ontario)
Ltd., The Simpson Tower, Toronto.

Aviation Insurance Agency



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---AIRCRAFT HIJACKING

YOUR SUGGESTION THAT FOR FUTURE HIJACKINGS EMB SHOULD BE IN POSITION TO SEND NOTE GUARANTEEING PAYMENT WILL BE CONSIDERED INTERDEPTLY.WE CAN SEE MERIT IN EMB POSSESSING THIS AUTHORITY FOR CASES IN WHICH CUBANS WILL NOT/NOT ACCEPT CAPTAINS SIGNATURE,ESPECIALLY SINCE FUTURE HIJACKINGS MAY INVOLVE AIRCRAFT IN SERVICE OF CDN CARRIERS OTHER THAN AIRCDA OR CPAC(FOR SMALLER AIRLINES CUBAN AUTHORITIES MAY BE RELUCTANT TO ACCEPT CAPTAINS SIGNATURE ON BILL).

2.WE WOULD PREFER THAT FOR TIME BEING YOU NOT/NOT SEEK INTERVIEW AT MFA TO REVIEW CONSULAR PROCEDURES RELATING TO HIJACKED AIRCRAFT.APPROPRIATE TIME FOR REVIEWING PROCEDURES WILL BE PROVIDED BY SECOND ROUND OF NEGOTIATIONS ON CDA-CUBA HIJACKING AGREEMENT WHICH WE HOPE WILL TAKE PLACE IN OTT IN NEAR FUTURE. ARTICLE II OF CDN REVISED DRAFT AGREEMENT OUTLINES OBLIGATIONS OF PARTY IN WHOSE TERRITORY AIRCRAFT IS FOUND.SINCE IT IS MOST LIKELY THAT WE SHALL REQUEST CUBAN GOVT TO EXTRADITE DEC26 HIJACKER,

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IT MAY BE PRUDENT TO EMPHASIZE CDN GOVTS SATISFACTION WITH CUBAN COOPERATION AND SPEEDY RELEASE OF AIRCRAFT AND CREW AND NOT/NOT TO EXPRESS DISSATISFACTION WITH CONSULAR PROCEDURES.

3. WE SHALL CONTINUE TO KEEP YOU INFORMED OF CDN DEVELOPMENTS (COURTEL FLO5 DEC29). ONT DIRECTOR OF PROSECUTIONS IS PREPARING DRAFT CHARGES FOR EXTORTION, KIDNAPPING AND ROBBERY. WHEN READY THESE CHARGES WILL BE SENT TO DEPT OF JUSTICE SINCE MINISTER OF JUSTICES CONSENT REQUIRED FOR LAYING CHARGES. ONCE CONSENT GIVEN, ONT WILL FORWARD TO DEPT OF JUSTICE COPIES OF INFO, WARRANT FOR ARREST AND DEPOSITIONS OF CREW. THESE DOCUS ARE REQUIRED TO SUPPORT REQUEST FOR EXTRADITION.

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