Canada's Invisible Cold War Pilots: An Examination of Three CF-104 Pilots and Their Operations in 1 Canadian Air Group

Sarah Lindquist HSTR 426, A01 Dr. Balzer 2 April 2019 When Canadians reflect on the Cold War, it is likely that conflicts and crises, such as the Korean and Vietnam Wars, or the Cuban Missile Crisis, come to their minds. Of course, the Cold War never escalated into an actual military conflict between the Soviet Union and the Western nations. But what many Canadians are unaware of is that Canada, as a NATO signatory, committed a navy, an army contingent, and an air division to help the NATO Alliance deter Soviet military aggression west of the Iron Curtain.¹

The CF-104, a fighter jet, was Canada's main air contribution to the NATO Alliance in Europe from 1962 to 1986.² With its small wings, needle-tipped nose, and tubular-shaped fuselage, and only 55 feet long, the CF-104 was a striking aircraft. It held the world's altitude and speed records in the 1960s, and pilots say it was an absolute thrill to fly.³ Though it was designed to be an interceptor aircraft, the CF-104 originally entered service with 1 Canadian Air Division (1 CAD) in Europe in 1962 in a nuclear strike and reconnaissance role.⁴ In 1970, the Air Division was renamed 1 Canadian Air Group (1 CAG), and by 1972 all CF-104s in Europe were removed from nuclear strike operations and converted to conventional attack.⁵ The 1 CAG base was located at Baden-Soellingen in West Germany, on the edge of the Black Forest and next to the Rhine River, and its headquarters (HQ) was located in Lahr, a city about 60 km south

¹ Anthony L. Stachiw and Andrew Tattersall, *Canadian CF104 Starfighter* (St. Catharines, ON: Vanwell Publishing Limited, 2007), 23.

² David L. Bashow, *Starfighter: A loving retrospective of the CF-104 Era in Canadian fighter aviation, 1961-1986* (Canada: Fortress Publications, 1991), 5. CF-104 is the name given to the F-104 flow in Canadian service. The F-104 was designed by American Aviation company Lockheed. The F-104 also saw service in many other countries' air forces.

³ Stachiw and Tattersall, *Canadian CF104 Starfighter*, 24; Major Robert Wade, interview by Sarah Lindquist, BlueJeans conference call, 11 March 2019.

⁴ Bashow, *Starfighter*, 18.

⁵ Ibid., 59 & 63.

of Baden.⁶ 1 CAG was composed of three operational CF-104 squadrons - 421, 439, and 441 – until the beginning of the Starfighter's phase-out from Canadian service in 1984.⁷

There is a shortage of academic literature on CF-104 operations in Europe. What little there is focuses on the Starfighter's nuclear strike years and neglects its conventional attack role. The academic literature also deals with the political aspects of the CF-104's armament and acquisition but fails to examine the aircraft's day-to-day operations. Only squadron histories and David Bashow's *Starfighter: A Loving Retrospective of the CF-104 Ear in Canadian Fighter Aviation*, 1961-1986 reflect on the Starfighters daily operations. Oral histories can help fill this gap in the historical literature.

As a student of the University of Victoria's Oral History Program, in partnership with the Canadian Military Oral History Project, I had the pleasure of interviewing three Royal Canadian Air Force (RCAF) veterans who flew the Starfighter as part of 1 CAG in Germany during the 1970s and 1980s. Major Robert Wade was posted to 441 Squadron in Baden in 1976 as an operational fighter pilot and then to 1 CAG HQ at Lahr as SO Air 3 in charge of War Plans and Exercises from 1979 until 1981. Major John Low and Lieutenant-Colonel Michael Spooner were both posted to Baden in the early 1980s when the phase-out of the CF-104 from Canadian service was underway. Low was posted to 439 Squadron as a line pilot in 1982. In 1984, he moved to 421 Squadron where he continued to operate as a pilot and perform the role of Deputy Operations Officer until November 1985. Spooner was posted to 421 Squadron in 1983 and ended his CF-104 service at 441 Squadron in 1986, when all CF-104 squadrons were officially stood down. Though these veterans each had their own distinct RCAF careers, their time as CF-104 pilots during the conventional era can shed light on this period of Canada's aviation history.

⁶ Lieutenant-Colonel Michael Spooner, interview by Sarah Lindquist, Comox, B.C., 10 March 2019.

⁷ Bashow, *Starfighter*, 138.

Only through veterans' testimonies can a complete understanding of 1 CAG operations be obtained. From my oral history interviews, three conclusions on CF-104 conventional operations can be made: conventional attack was a demanding role for the Starfighter; CF-104 pilots' major role was maintaining operational readiness and exercising for war; and flying the CF-104 was a very risky job. After addressing the lack of acknowledgement of the CF-104 conventional era in the academic literature, each of these points will be examined in turn.

In 1964, former Canadian minister of national defence Paul Hellyer signaled the government's intent to gradually shift the CF-104 from a nuclear strike to a conventional role. But it was Pierre Elliot Trudeau's Liberal government that officially announced in 1969 that the CF-104s in Europe would be removed from the nuclear strike role by 1972 and perform the conventional attack role instead. Trudeau was known for being anti-military, and he believed that Canada's nuclear strike capabilities were opposed to the country's peace-keeping responsibility. This decision was criticized by political observers at the time, and continues to receive criticism from contemporary historians. For example, Sean Maloney, author of *Learning to Love the Bomb: Canada's Nuclear Weapons During the Cold War*, believed that "[t]he peak operating years for 1 Air Division were from 1964 to 1969," implying that, on balance, the CF-104's conventional years were immaterial. Similarly, in *Swords, Clunks and Widowmakers: The Tumultuous Life of the RCAF's Original 1 Canadian Air Division*, Ray Stouffer sees the 1950s as the "halcyon days" of the RCAF. Probably the most brazen criticism comes from Gerald Porter in *In Retreat: Canadian Forces in the Trudeau Years*. Porter describes the Canadian

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⁸ Ray Stouffer, Swords, Clunks and Widowmakers: The Tumultuous Life of the RCAF's Original 1 Canadian Air Division (Ottawa, ON: The Royal Canadian Air Force, 2015), 132,

http://publications.gc.ca/collections/collection_2016/mdn-dnd/D2-355-2015-eng.pdf.

⁹ Bashow, *Starfighter*, 57.

¹⁰ Stouffer, Swords, Clunks and Widowmakers, 155-156.

¹¹ Sean M. Maloney, *Learning to Love the Bomb: Canada's Nuclear Weapons During the Cold War*, 1st ed. (Washington, DC: Potomac Books, 2007), 336.

forces in NATO as of 1970 as "too small and ill-equipped to perform its assigned reconnaissance and counter-attack role, and lack[ed] the capability even to defend its own bases against direct conventional attack." He also holds that the RCAF was useless in the counter-attack role without nuclear weapons. Porter saw the remaining three squadrons of Starfighters at Baden-Soellingen as of 1970 as "a token suicide force with no strategic significance." These sentiments denigrate the Starfighter's conventional role and render the CF-104 conventional era invisible.

In 1967, NATO implemented a new doctrine called Flexible Response that gave NATO forces the ability to carry out a non-nuclear war by "maintaining sufficient conventional forces." If the Soviets did attack, NATO forces would release conventional ordnance on them first, and then, if deemed necessary, resort to nuclear weapons. As expressed in the Canadian government's 1971 White Paper on Defence, the purpose of NATO's conventional capabilities was to contain hostilities with the Soviet Union with non-nuclear weapons so they would not escalate into a nuclear war. In the conventional role, if war did break out, CF-104 pilots would be targeting Soviet troops and tanks moving through choke points along the border between East and West Germany. Because it was a hilly area, it was expected that the Soviets would have to come through these choke points, or gaps, in the terrain. To CF-104 pilots' job was to stop the Soviet advance as long as the war remained conventional. If the war went nuclear, CF-104

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¹² Gerald Porter, *In Retreat: The Canadian Forces in the Trudeau Years* (Ottawa: Deneau & Greenberg, 1978), 140.

¹⁴ Bertram C. Frandsen, "The Rise and Fall of Canada's Cold War Air Force, 1948-1968" (PhD thesis, Wilfrid Laurier University, 2015), 259-260,

https://scholars.wlu.ca/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2857&context=etd.

¹⁵ Ibid., 260.

¹⁶ Bashow, Starfighter, 57.

¹⁷ Wade, interview.

pilots' job was over. ¹⁸ In our interview, Lieutenant-Colonel Spooner emphasized that there was no situation in which CF-104 pilots would attack the Soviets first; the Canadian Armed Forces have always been a defensive structure put in place to defend Canadian and Western freedoms.

Thus, 1 CAG's potential war operations would have been purely reactive. ¹⁹

The first conclusion that can be made about the CF-104's conventional attack role is that it was a challenging role for the Starfighter. A large reason for this was the nature of the job. All flying was done at low level, normally around 200 feet or as low as fifty feet when attacking a target, and at high speeds of up to 550 knots. Though the CF-104 was well-suited for this environment – it could handle turbulence effortlessly and no other plane at the time could catch it – a single moment of inattention by a pilot could result in a crash. As Major Wade describes, "Travelling at nine miles a minute, doesn't take much to make a mistake and end up in the trees." Weather conditions made low-level flying especially challenging. Throughout December and January, the Rhine Valley was fogged in, and during the summer it was hazy. In Europe, two or three miles visibility was a pretty good day. This meant that CF-104 pilots always had to be alert.

The CF-104's design also posed challenges for the conventional role. It had very small, thin wings that limited its ability to turn quickly and made it susceptible to anti-aircraft fire.²⁵

Major Low said it took a large distance for the Starfighter to turn around. This problem was

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¹⁸ Wade, interview.

¹⁹ Spooner, interview.

²⁰ Ibid.

²¹ Bashow, *Starfighter*, 63-64.

²² Wade, interview.

²³ Major John Low, interview by Sarah Lindquist, Comox, B.C., 9 March 2019.

²⁴ Wade, interview.

²⁵ Michael Byers, "One Dead Pilot: Single-Engine F-5 Bad Choice for Canada's Arctic," (Rideau Institute: Canadian Centre for Policy Alternatives, 2014), 6,

 $https://www.policyalternatives.ca/sites/default/files/uploads/publications/National \% 20 Office/2014/06/Single_Engine_F35s_a_Bad_Choice.pdf.$

augmented with high wing loading with conventional weapons. ²⁶ Flying at low-level meant that the Starfighter's engine was susceptible to bird strikes, and, because it had a single engine, any engine failures would lead to crashes.²⁷ Major Wade remembers a close call he had after he hit a bird on a Maple Flag exercise North of Primrose Lake, Alberta. He had just come off a target and had two F-15s attacking him and his wingman. They were flying low and fast, over 800 knots, when Wade hit a pelican that blew a hole through the back of his Starfighter's intake and took off his leading-edge flap. He says hitting a bird is like hitting a cannon ball. In the end, he landed safely, but the plane was written off.²⁸

Another challenge for the CF-104 in the conventional role was attacking targets effectively. In the nuclear strike role, CF-104 pilots were flying single ship, meaning that they would attack a target solo. The destruction potential of one nuclear weapon was so great that one pilot could cause substantial damage to the enemy: the smallest nuclear bomb that the RCAF had in Europe in the 1960s could cause as much damage as the bombs dropped on Hiroshima or Nagasaki.²⁹ The Starfighter's conventional arsenal, by comparison, included the M-61-A-1 rotary cannon, CRV-7 rockets, CBU-1 cluster bombs, BLU-1 and BLU-27 napalm fire bombs, BL-755 cluster bombs, and the MK-82 or "Snakeye" general purpose bombs. 30 The CF-104 could only carry four bombs in total under its wings despite improvements made to increase its carrying capacity. ³¹ Conventional ordnance was less decisive than nuclear weapons, and more bombs were needed to cause significant damage to a target. Thus, 1 CAG needed new weaponsdelivery tactics to weaken the enemy.

^{Bashow,} *Starfighter*, 63.
Byers, "One Dead Pilot," 6.

²⁸ Wade, interview.

²⁹ Maloney, *Learning to Love the Bomb*, xvii.

³⁰ Bashow, *Starfighter*, 64-75.

³¹ Bashow, *Starfighter*, 66; Wade, interview.

The CF-104 squadrons' early conventional years were dedicated to determining new tactics for delivering conventional ordnance. Operational staff at 1 CAG determined that the best tactic was to "try and concentrate the maximum number of aircraft over the target in the shortest possible time."³² This strategy called for CF-104 pilots to attack in formations, or elements, of two to twelve aircraft. Each element had a lead pilot who was responsible for the mission, a job for which a high level of skill was required. Major Low and Lieutenant-Colonel Spooner each became section leads – a four-plane formation – during their postings at 1 CAG.³³ A section lead was responsible for determining and assessing the target and how the pilots would approach the target and deliver the weapons. The goal was to get to the target on time without conflicting with other aircraft. In a concentrated area, there would be dozens of aircraft approaching with their own time on target (TOT).³⁴ At this time, other NATO-allied air forces, like the Dutch, Danes, and Belgians, did their low-level flying in West Germany because flying low-level was restricted in their own airspaces due to noise complaints.³⁵ All incoming aircraft would have to be separated enough to be on target in plus or minus one minute, and each attacking pair of CF-104s had to be separated by at least 30 seconds so the fragmentation from the previous attack would not hit the incoming planes.³⁶ The section lead also received inputs from the other three pilots in his formation who were all assigned their own tasks, such as checking the weather or relaying airspace flying restrictions.³⁷

A CF-104 pilot had to fly directly over his target to hit it accurately, sometimes as low as fifty feet.³⁸ The CF-104 did not have an automated weapons delivery system, nor was the CF-

³² Bashow, *Starfighter*, 57.

³³ Spooner, interview.

³⁴ Ibid.

³⁵ Wade, interview.

³⁶ Spooner, interview; Wade, interview.

³⁷ Spooner, interview.

³⁸ Bashow, *Starfighter*, 70; Spooner, interview.

104's conventional arsenal equipped with "smart" weapons. ³⁹ Thus, pilots used a manual delivery system in which they had to calculate the trajectory of each bomb. This meant having to "calculate the exact dive angle and exact air speed and the exact release altitude, so the bomb, when it left the aircraft, would hit the target." ⁴⁰ The precision of CF-104 pilots' manoeuvers – flying into a target in a densely-populated airspace within a timeframe of mere seconds and dropping weapons accurately – is astounding and deserves a great deal of recognition.

The second lesson from my oral history interviews is that the CF-104 pilots' major role was maintaining operational readiness and exercising for war in case World War III broke out. In effect, CF-104 pilots' work at Baden consisted of preparing days on end for a war that never occurred. I asked each veteran to describe his typical work day at Baden. Major Low replied, "There was no real typical day, that's for sure." The only typical thing about a CF-104 pilot's workday is that he was constantly training. "We were training, training, training." Each day was different in that there was different sorties pilots would fly, but each day followed a similar structure. Pilots would arrive at the base at 7:00 am. Their day would start with a weather report followed by a reconnaissance period in which one squadron member would flash images of enemy tanks, artillery, and planes that the pilots would have to memorize. Next, pilots checked the schedule to see their mission for the day. Most missions involved simulating a four-plane attack on a "target" somewhere in Bavaria. Other missions involved flying to various weapons ranges, such as Siegenberg, north-east of Munich, where pilots would drop practice bombs, or Suippes in France, where pilots practiced firing the Gatling gun. Pilots also went on

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³⁹ Bashow, *Starfighter*, 69-70.

⁴⁰ Wade, interview.

⁴¹ Low, interview.

⁴² Spooner, interview.

solo navigation trips. ⁴³ They would then spend about one hour briefing for their mission, which included planning their attack, drawing out maps, and putting times on targets. Next, pilots would sign out their planes from the Hardened Aircraft Shelters (HAS) and fly their mission, which would normally range from 60 to 90 minutes. ⁴⁴ When pilots returned to the base, they spent an hour debriefing, which included discussing the lessons learned. This was done without exception. Even if pilots flew a mission perfectly, they had to discuss how that mission could be improved. ⁴⁵

Training at Baden prepared pilots to participate in exercises. NATO divided Europe into three military zones – North, Central, and South. The Central Region was under the command of Allied Air Forces Central Europe (AAFCE). AAFCE had two subordinate headquarters, one in the north called 2 Allied Tactical Air Force (2 ATAF) and one in the south called 4 ATAF. 1 CAG was under the command of 4 ATAF. ⁴⁶ Each headquarters assessed the performance of the air forces under their command. ⁴⁷ Exercises were held to test organizational preparedness and ensure that all squadron members, pilots and ground crew, were operating to their best of their ability. ⁴⁸ "Everything was scrutinized, from maintenance to servicing, to combat performance and HQ communications." ⁴⁹ Major Wade estimates that he took part in six to eight exercises a year. ⁵⁰ At the 1 CAG level, exercises were known as "Starfighters," which simulated that the base was at war. ⁵¹ Evaluators examined how well all three 1 CAG squadrons operated together in

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⁴³ Low, interview.

⁴⁴ Ibid.

⁴⁵ Wade, interview.

⁴⁶ Samuel Kostenuk and John Griffin, *RCAF: Squadron Histories and Aircraft, 1924-1968* (Toronto and Sarasota: Hakkert & Company, 1977), 146.

⁴⁷ Wade, interview.

⁴⁸ Larry Milberry, *Fighter Squadron: 441 Squadron from Hurricanes to Hornets*, (Toronto, ON: CANAV Books, 2003), 147-150.

⁴⁹ Ibid., 150.

⁵⁰ Wade, interview.

⁵¹ Ibid.

terms of sortie generation rate, weapons loading, communication, and problem solving. Pilots and ground crews could be recalled at any time of day, even as early as 4:00 am. The recall word was "Snowball." "Snowball, Snowball!" was announced on the base sirens and over the Canadian radio system in the town of Baden to alert pilots who lived off the base that they had to report back immediately. 52 Upon arrival at the base, pilots would attend a briefing, plan their mission, and then launch. The briefing would describe what the "threat" situation was, which was normally located by the East-West German border. As these exercises grew in size, CF-104 pilots defended Baden from a Red Army "attack." ⁵³

Exercises at higher organizational levels were structured similarly, but they were assessing how different NATO air forces worked together. At the 4 ATAF level, people from HQ were evaluating the interoperability between bases. For example, they examined how efficiently a CF-104 pilot could fly to another base in Germany and have that base's ground crew refuel and rearm his plane with weapons. At AAFCE, the highest level of command, people at HQ were evaluating the chain of command between different bases and how well each base could communicate with all the various HQs. They were also assessing how well various air forces under NATO coordinated attacking targets.⁵⁴

Another part of a Starfighter pilot's job was participating in squadron exchanges. The purpose of squadron exchanges was interoperability. "The idea was to spend approximately a week visiting another NATO squadron of a different nationality, swapping techniques, procedures, lies, etc., and then host them at a later date on a reciprocal visit to home base."55 Pilots needed to be able to land at an ally's base in Europe, refuel, and have their aircraft

⁵² Spooner, interview.⁵³ Ibid.

⁵⁴ Wade, interview.

⁵⁵ Bashow, Starfighter, 49.

reloaded with weapons. ⁵⁶ Exchanges also gave pilots the opportunity to practice Dissimilar Air Combat Training (DACT). CF-104 pilots were used to flying with other CF-104s and knew what the plane was capable of, how it turned, and so forth. DACT allowed pilots to learn the capabilities and flying envelopes of other aircraft so they had a better chance of surviving air combat against the Soviets, who had a fleet of different aircraft.⁵⁷ 1 CAG squadrons would participate in local or national exchanges where they would host or be hosted by another nation's air force located in Germany. 58 Lieutenant-Colonel Spooner recalls that 421 Squadron's local exchanges would take place with their sister squadron, a German squadron in Memmingen. 421 Squadron would fly eight planes over to Memmingen once a year and fly with the German pilots, and at another time during the year the German squadron would be hosted by 421 Squadron.⁵⁹

1 CAG would also arrange exchanges with NATO air forces outside of Germany. In 1985, Major Low and Lieutenant-Colonel Spooner were both members of 421 Squadron and participated in an exchange with a Dutch Air Force squadron in the Netherlands. CF-104 pilots flew in the Dutch F-16 aircraft, learned how the Dutch Air Force was operating, and attacked their targets. 60 Low remembers participating in a rocket target contest in which Dutch and Canadian pilots were firing at a tank in the Dutch range. Any pilot who hit the tank was awarded a case of beer; Low was the only one who hit the tank, and he received the case of beer. ⁶¹ Notwithstanding some lighter moments, CF-104 pilots' squadron exchanges and daily training missions honed their skills and thoroughly prepared them for potential hostilities.

⁵⁶ Spooner, interview.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Low, interview.

The third and final conclusion from my interviews is how dangerous and risky being a CF-104 pilot was. Considering that the CF-104 never entered combat, its accident and fatality rates are startling. Of the 199 CF-104s in Europe, 110 crashed throughout the aircrafts' twenty-five years in service. One out of every nine pilots ejected from the plane, and thirty-seven pilots died. Put another way, one out of every nineteen pilots who ever flew the Starfighter was killed. After reviewing all CF-104 crashes, Bashow determined that only four out of the thirty-seven accidents that resulted in fatalities were due to systems malfunctions. All of the other fatalities were the result of some form of pilot inattention. A moment of carelessness could cost a pilot his life.

Everyone in the Starfighter community knew at least one fellow CF-104 pilot who lost his life, as Spooner put it, "doing what he loved." Throughout his RCAF career, Spooner flew with around thirty pilots who died, and Wade worked with thirty-eight pilots who lost their lives. No CF-104 pilot fatalities took place in Europe when Low was serving with 439 and 421 Squadrons from 1982 to 1985. Nor did any take place while Spooner was serving with 421 and 441 Squadrons from 1983 to 1986. However, there were fatalities during Spooner's and Low's training at Cold Lake. Low remembers two of his instructors departing from the base to practice formation flying on a snowy day, and they never returned. Albeit on other equipment, one pilot died on Spooner's F-5 training course after crashing on landing. Further, an F-16 pilot died on the third or fourth day of Spooner's and Low's squadron exchange to the Netherlands. From these fatalities, Starfighter pilots were constantly reminded of the perilous nature of their job.

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⁶² Wade, interview.

⁶³ Bashow, Starfighter, 93.

⁶⁴ Spooner, interview.

⁶⁵ Ibid.

None of the three veterans I interviewed ever had to eject, but they all flew at least one potentially catastrophic flight in the CF-104. Spooner remembers flying over the peak of a hill and almost colliding with a hang glider. Low experienced hydraulics failures on three separate occasions. In one instance, he was flying a normal training mission in a four-plane formation when he realized that his plane was not behaving properly. Low immediately broke off from the formation and landed at the German Air Force base at Memmingen. Upon landing, his drag chute did not deploy and his brakes did not work because they were powered by the hydraulics system, but he survived unscathed. Wade was leading a four-plane Starfighter formation that took part in an American Red Flag training exercise in Nevada, north of Vegas. He was flying over the top of a ridge when a F-5 came directly at him in the opposite direction; they missed each other by 20 feet. Nevertheless, Wade continued onto his target with his wingman and his number three and four were thirty seconds behind. When he came off his target he looked back and saw a fireball that he thought was the result of three and four's weapons hitting the ground. But it sadly turned out that his number three had hit the ground and died.

Despite close calls and watching peers die, CF-104 pilots remained unwaveringly devoted to their job. Of course, as Major Wade says, "It hurts when you lose a good friend," but all CF-104 pilots remained focused on performing their job to the best of their abilities and tried to learn from the mistakes of their peers. Eike every CF-104 pilot, Low flew the Starfighter everyday confident that he would complete his mission successfully; crashing was not an option. Similarly, Wade said: "I never felt fear ever. I felt so confident that I could do that job

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⁶⁶ Spooner, interview.

⁶⁷ Wade, interview.

⁶⁸ Spooner, interview.

⁶⁹ Low, interview.

well."⁷⁰ Bashow puts it this way: "That deep-rooted belief in one's own abilities, coupled with the desire to always be the *best*, is the sustaining force for a fighter pilot in times of loss."⁷¹

Due to the number of Starfighter pilot fatalities, the German and Canadian press called the Starfighter the "Widowmaker." Many sources, both academic and popular, wrongly claim that CF-104 pilots referred to the aircraft by that name. For example, Gerald Porter claimed that the CF-104 was "[d]ubbed the 'widowmaker' by its pilots." Bashow emphasizes that he never heard a pilot refer to the CF-104 as the "Widowmaker." During my interviews, the pilots never called the Starfighter the "Widowmaker." The veterans all expressed a deep admiration for the Starfighter, and they all said it was their favourite plane to fly out of all the planes they flew throughout their aviation careers. Major Low said that he never thought about the name the "Widowmaker" when he was flying. Despite the CF-104 being in service for twenty-five years, Spooner said that he never felt unsafe flying it because Canada invested a lot of money to maintain the aircraft. Before Spooner was posted to Baden in 1983, the entire CF-104 fleet went through a Depot Level Inspection and Repair (DLIR) program. Spooner said that, "the airplane always treated [him] well."

At the end of each interview, I asked each pilot what they felt needed to be shared about 1 CAG operations in Europe in the 1970s and 1980s that the general public does not know about. Lieutenant-Colonel Spooner and Major Wade expressed that they think Canadians do not know what they were doing in Europe during the Cold War. Wade wants the public to know that flying the CF-104 was a dangerous job: "The public should know how much effort [it] took to do that

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⁷⁰ Wade, interview.

⁷¹ Bashow, Starfighter, 99.

⁷² Porter, *In Retreat*, 152.

⁷³ Bashow, *Starfighter*, 92.

⁷⁴ Low, interview.

⁷⁵ Bashow, *Starfighter*, 76.

job, and they don't. They don't have clue." He wishes that "everybody could appreciate those skill sets that those boys had." The Starfighter served twenty-five years in Canadian service, and for the majority of those years, 1970 to 1986, it performed the conventional role. It is a shame that the CF-104's conventional era is neglected by academics who have rendered it invisible and is unknown to the public. From my oral history interviews, I gained an in-depth understanding of the Starfighter's conventional role and the amount of risk being a CF-104 pilot entailed. I also became awestruck at the high-level of skill and devotion that CF-104 pilots brought to their jobs every day. We will never know if the CF-104 was effective in combat in the conventional role. But, what we do know is that 1 CAG's CF-104 operations were one part of what made NATO's deterrence efforts successful.

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