



A CF-18 from Canadian Air Task Force Lithuania on patrol as part of the NATO Air Policing Block 36 during Operation *Reassurance*, 20 November 2014.

“Making Sausage”: RCAF Doctrine 2005-2016

by Allan English

Introduction

To paraphrase an old saying, “If you like doctrine and sausages, you should never watch either one being made.” The adage captures the essence of the idea that making doctrine is a messy process that, if seen, could put you off from ever reading it again. This brief article argues that, like many other Western doctrine processes, recent Royal Canadian Air Force (RCAF) doctrine has been made more like sausage than the rational doctrine process described in writings on the topic. I will focus on the period 2005-2016 here, as this era saw the RCAF engage in a doctrine process, not yet well documented, that effected a major change in both the content and process of writing its doctrine, and that epitomized “making sausage.”

Doctrine in Theory and Practice

To begin, I would like to examine what doctrine *should be in theory* compared to what is *produced in practice*, and then called doctrine. Ideally, “military doctrine is comprised of principles, theories and policies, accepted as valid and reliable, which offer military forces good chances for success ... [it is an] accumulation of knowledge which is gained primarily from the study and analysis of experience. As such, doctrine reflects what works best.”¹ I use this definition from the much-maligned capstone air doctrine publication *Out of the Sun* (1997), because it reflects what we taught at the Canadian Forces College (CFC) in the Aerospace Studies Department when I was Co-Chair there from 2001 to 2005, and it explains the essence of good doctrine – a constant interplay of theory

and analysis of experience on operations (practice). Even when these precepts are followed, if it is to be widely read and applied, it must be “memorable,” as I.B. Holley explained in his classic essay on US Air Force doctrine:

...the way we articulate doctrine is flawed...our doctrinal manuals consist largely of generalizations. They offer page after page of abstractions. Unfortunately, abstractions don’t stick in the mind as well as real-life illustrations or historical examples. I contend that paying more attention to the format in which doctrine is presented will work toward a wider familiarity with doctrine by Air Force decision makers at all echelons.²

Currently, the RCAF and Canadian Armed Forces (CAF) approach to doctrine fits Holley’s abstraction and generalization characterization. They define doctrine simply as the “fundamental principles by which military forces guide their actions in support of objectives.”³ This definition reflects what might be called a faith-based view of military doctrine, in which it resembles religious doctrine as a statement of beliefs exhorting the faithful how to act without explaining why such actions are preferable to others. This view of military doctrine was captured by Henry L. Stimson, the US Secretary of War, 1940-1945, who said that during the Second World War, the US Navy Department, “...frequently seemed to retire from the realm of logic into a dim religious world in which Neptune was God, Mahan his prophet, and the United States Navy the only true Church.”⁴ As I have written elsewhere, this feature of doctrine has been prominent in much of the late-20th and early-21st Century American military doctrinal debates with respect to how we should conceptualize the use of military forces in conflicts, with Operational Art, Network Centric Warfare and



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Secretary of War Henry Stimson shakes hands with General Dwight D. Eisenhower in 1945.

Effects Based Operations being the articles of faith of the three major “churches,” the US Army, the US Navy, and the US Air Force.⁵ These debates were followed closely in Canadian defence circles, and the resulting US doctrine was frequently adopted by the CAF “second-hand” as a result of bureaucratic direction, with little-or- no modification for Canadian circumstances.⁶ One characteristic of American doctrine that did have some resonance in Canada was that it was often written by each service to support its case in budget wars with the other services. As described by General Anthony C. Zinni, US Marine Corps (retired), “We teach our [junior officers] to recognize that sister service as the enemy... we fight each other for money, programs, and weapon systems. We try to out-doctrine each other by putting pedantic little anal apertures... in doctrine centers... to ace out the other services and become the dominant service in some way... Interservice rivalry... [is] going to kill us if we don’t find a better way to do business.”⁷ Given the realities of doctrine writing, perhaps it is fortunate for those on the front line that doctrine actually has a weak or indirect effect upon the behaviour of armed forces in operations. Instead, how armed forces operate is “...more a function of their culture than of their doctrine.”⁸

Canadian Air Force Doctrine before 2005

The history of Canadian air force doctrine is a chequered one, and little has been published about it. Up until the end of the Second World War, the RCAF used Royal Air Force (RAF) doctrine in the absence of any desire or capability to create its own. From its establishment in 1943, the RCAF Staff College was a key institution in the development of Canadian air doctrine, but that ended with its closure in 1966 and the unification of the Canadian Armed Forces in 1968. Thereafter, air doctrine in Canada degenerated into the views of separate air warfare communities sometimes cobbled together into one volume with little coherence or consistency. The lack of coherent air force doctrine above the tactical level after 1968 also resulted in a series of *ad hoc*, expedient changes to the structure of Canada’s air forces, resulting in disjointed, often dysfunctional, command and control arrangements.⁹ The Chief of Air Staff (CAS) tried to rectify some of the air force’s doctrinal shortcomings with the publication of *Out of the Sun* in 1997. However, it has been criticized because its content was “intellectually questionable,” and it failed to explain the rationale for the existence of a Canadian air force.¹⁰



Lieutenant-General Ken Pennie during a visit to 19 Wing Comox in March 2004.

The nadir of postwar Canadian air doctrine came in 2005 when the CAS cancelled *Out of the Sun* without replacing it, only promising that new doctrine would be drafted. This led the CFC to decree that senior officer professional military education (PME) taught there would rely upon foreign aerospace doctrine, namely that of the US Air Force, as well as US Department of Defense joint air doctrine. Another outcome of this absence of Canadian aerospace doctrine, was that Canadian Forces (CF) joint doctrine became increasingly dominated by land-centric concepts, which were not always appropriate for aerospace forces.¹¹ Adding to air force doctrinal woes in 2005, was the overall state of the air force as described by the then-CAS, Lieutenant-General Ken Pennie, as being "...beyond the point where even constant dedication is sufficient to sustain the capabilities needed to meet assigned Defence tasks...Our Wings and Squadrons are too hollow to sustain the current tempo of operations."¹²

Canadian Air Force Doctrine 2005-2016

The establishment of the Canadian Forces Aerospace Warfare Centre (CFAWC) that year was intended to be part of air force renewal and transformation. Its creation was announced by Pennie in April 2005 and it was stood up by his successor, Lieutenant-General Steve Lucas, in October

2005. An air force spokesperson said CFAWC was being created in part to address the problems Pennie identified by providing, "...the air force with a doctrinal focal point for the development of new capabilities and the enhancement of existing ones... Consider it like a think tank for where the air force is, where it's going, and how it will get there in terms of our doctrine, fleets, equipment and resources..." This statement also hinted at future developments: "[CFAWC] will align the air force with the army and navy as the CF moves towards a more integrated force...consistent with the vision of the Chief of Defence Staff General Rick Hillier... It will allow us to work (more closely) with the army and navy...it's really important that what we are doing in the aerospace community is consistent with what the Chief of Defence Staff (has planned)."¹³ Current RCAF information on CFAWC reflects some of the original intent stating that it will act "...as a catalyst for air-power development and as a steward for air-power knowledge...to acquire the right capabilities and develop the appropriate doctrine to ensure an agile and integrated Air Force well into the future."¹⁴

CFAWC's first Commanding Officer, Colonel Jim Cottingham, serving as such from 2005 to 2008, took his doctrinal responsibilities seriously, and, given the well-known deficiencies in air force doctrine, started to work on creating new doctrine. As a graduate of the US Air War College, Cottingham believed in the conventional doctrinal process described earlier, and he initiated it with alacrity. He contacted a number of people inside and outside of the air force to establish an informal working group which would provide CFAWC's staff with input to assist it in writing new doctrine. I was among those who were invited to be part of the working group, which *corresponded* and then *met* in Cornwall for two days in January 2006. The group included representatives from all the air force warfare communities and the Aerospace Studies Department at CFC. The result was *consensus on* and an *outline of* a new capstone air force doctrine manual. While the product was similar in general content to past Canadian aerospace doctrine, the process was thought by those participating to be the manner in which future air force doctrine would be written, by allowing CFAWC to tap into various sources of expertise, based upon its mandate to conduct the necessary research, "...education, experimentation, simulation, lessons learned and conceptual development functions."¹⁵ Some of my colleagues and I provided feedback to CFAWC in March 2006 on a draft of the new manual, which was based upon the results of the Cornwall meeting. At that point, everything in the doctrine process seemed to be going according to CFAWC's stated mission and Cottingham's plans.

Soon thereafter, everything changed. Lucas, the new CAS, directed that the part of capstone manual related to air force "functions" would henceforth be based upon the Canadian Army "combat functions" of sense, shape, move, sustain, command. While the intent may have been to "align" the air force with Hillier's "Team Canada" transformation of the CAF, in retrospect, Hillier's transformation had many flaws, and initial air force enthusiasm, along with that of others, waned as the flaws became evident and as the transformation became "jarmy," i.e., land-centric approaches, covered with a veneer of jointness.¹⁶



DND photo AR2007-2041-10 by Corporal Simon Duchesne

Canadian Forces Chief of the Defence Staff General Rick Hillier (right) in Afghanistan, October 2007.



DND photo IS2014-7169 by Jacek Szymanski

A Canadian Forces CC-130J *Hercules* transport releasing Canadian jumpers during Exercise *Orzel Alert* in Poland, 5 May 2014.



Insertion and extraction training with an RCAF CH-147F *Chinook* helicopter, 15 July 2016.

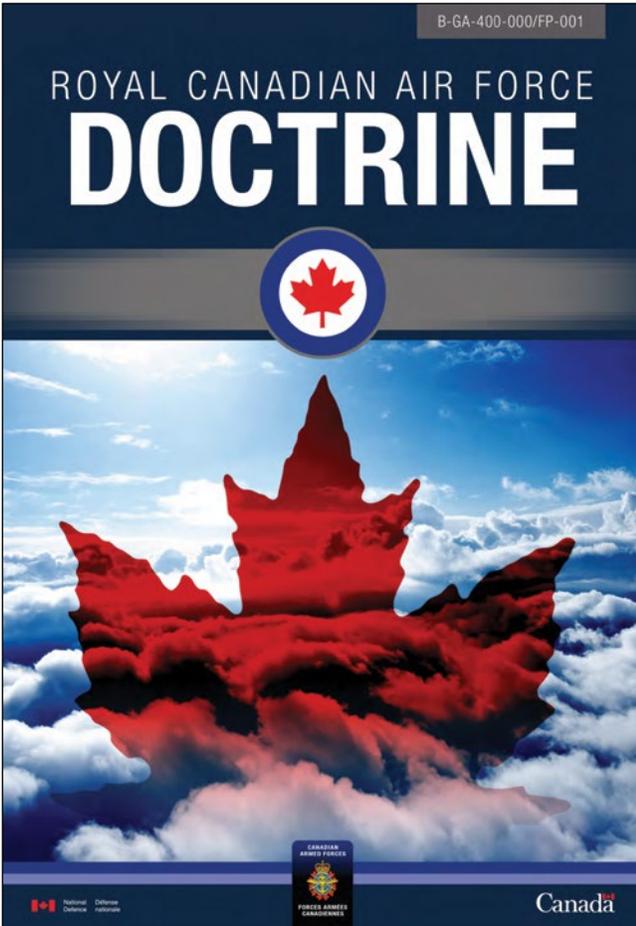
Aaron Jackson, whose doctoral dissertation and subsequent book examined aspects of CAF and RCAF doctrine, is among those commentators who view Lucas' direction in a positive light. Describing the army's combat functions as a product of an "advanced" army concept development process and "a fundamental component of the evolution of Canadian army conceptual thinking since 2001," he portrays "the decision to adapt an Army concept for use within Air Force doctrine" as allowing "Canadian air power to be located within a sound theoretical framework," and that the air force "appears to have been able to successfully tie the roles of its various communities into this broader conceptual model, thus avoiding the problem of acceptance that was encountered following the release of *Out of the Sun*." Jackson describes previous air force doctrine, consistent with that of other Western air forces, particularly US Air Force and RAF doctrine, as "too inflexible" for the CAF. Of equal or perhaps greater concern for those supporting Lucas' intervention was their belief that the lack of appropriate air doctrine had allowed the Army and Navy "...to make a politically better case for their service than the Air Force has" in Ottawa's budget wars.¹⁷

What Jackson and other commentators do not mention is that, at the time of their adoption by the air force, the terms sense, shape, move, sustain, and command were, according to the Director General Land Combat Development, "...not discrete in theory or in practice, but rather recognize broad areas of capability with significant overlap... [they] are artificial intellectual constructs that help in the definition and analysis of military capabilities."¹⁸ Furthermore, by 2011, these "artificial intellectual constructs" had become something quite different. For example, in one joint

doctrine publication, a variation on them, "Command, Sense, Act, Shield, and Sustain," is called the "five main joint operational functions," and described as "the functional capabilities required by a JTF [Joint Task Force] in order to effectively employ forces."¹⁹ However, in yet another joint publication, they had become "six capability domains (Command, Sense, Act, Shield, Sustain, and Generate)," but no evidence or explanation is given in either publication to substantiate the differences in terminology.²⁰

Part of the reason for this lack of consistency in CAF joint doctrine can be found in a 2007 Chief of Review Services (CRS) report evaluating the state of CAF joint doctrine development. It concluded that joint doctrine had "serious deficiencies," including the lack of a rigorous joint doctrine process, a lack of "adequate training and professional education in joint doctrine and doctrine development," and that the existing "joint operational doctrine process will not meet the needs of CF operational units."²¹ This 2012 assessment of some US Army doctrine mirrors Holley's 1995 critique of US Air Force doctrine, and it sums up the state of much of CF joint doctrine then and now: "...it does not provide the necessary details. In content, it defaults to reasonable but timid generalities of little use to commanders and staff officers... [it] avoids nuanced discussion in favor of a numbing series of definitions, a taxonomy of operational functions and methods... which is the worst possible method of conveying the complexity of land operations."²²

It appears that little has been done to address the CRS criticisms of Canadian doctrine, as one can see from the parts of RCAF doctrine describing the army functions concept in an



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air force context. The original introduction of these functions by Lucas in 2006 was justified in the RCAF’s capstone doctrine manual, *Canadian Forces Aerospace Doctrine*, with the statement: “A century of air warfare has demonstrated that all effective air forces, whether they are large or small, are capable of performing a number of specific functions. In Canada, these functions are: Sense, Shape, Move, Sustain, Command.”²³ Three years later, in the 2010 version of the capstone manual, “a century of air warfare” had apparently demonstrated that effective air forces perform *six* functions, namely “Command, Sense, Act, Shield, Sustain, and Generate.”²⁴ No sources or analysis are provided in either version to support the validity of these different assertions. The latest version, published in 2016, affirms the same six functions as the 2010 version, but no longer uses 100 years of history to justify its choice of functions. Rather, they are presented as articles of faith to be accepted by believers.²⁵ Another one of its faith-based characteristics is that, unlike previous versions which provided few references to support the adoption of the functions, the latest version cites “scripture” (in the sense of authoritative texts considered to be central to a religion’s practice or beliefs)²⁶ in support of its choices, i.e., joint doctrine and the *Defence Terminology Bank* (DTB). However, as with the other versions and joint doctrine, no principles, theories, or detailed analysis of operational experience are given to explain to readers the rationale behind the variety of specific functions.²⁷ One wonders if those responsible for RCAF

doctrine realized that much of the joint doctrine they cite, and its products in the DTB, was “significantly deficient.”²⁸

Conclusion

The RCAF doctrine development process 2005-2016 is another example of “making sausage.” As we have seen, its product is not substantially different from that made by other “sausage factories,” some of whose products the RCAF uses to craft its doctrine. Unfortunately, this limits its utility because, while this doctrine can be memorized and regurgitated by the unlucky few required to do so, like many of its predecessors, it lacks the principles, theories, and analysis of operational experience that would allow it to be studied, debated, and revised, based upon evidence.²⁹ As they exist, these doctrinal products are not seen as particularly relevant by most, are read by few, and used by fewer still. Like much academic work in similarly esoteric subjects, they are “... published for an audience smaller than a successful cocktail party, and the rest falls still-born from the press, ignored by citizen and colleague alike.”³⁰

The early promise of CFAWC becoming the “doctrinal focal point” of the air force and acting as its “think tank” and “steward for air-power knowledge” was quickly dimmed when, less than a year after its creation, the CAS derailed the air force doctrine development process initiated by CFAWC by imposing Canadian Army “combat functions” on air force doctrine. The result has been ten years of CFAWC “reverse engineering” parts of air doctrine to conform to the Lucas’ edict, while relying upon joint doctrine with “serious deficiencies.” It might be disturbing to some that few in the RCAF doctrine world seemed to be aware that they were working with artificial intellectual constructs, not discrete combat functions, even as joint doctrine inexplicably transformed them into different guises, such as “five main joint operational functions” and “six capability domains.” Perhaps more disturbing, at least to me, is that when I drew these facts to the attention of a group of senior air force officers during a 2012 seminar on command and control, the senior officer present declared: “You may be right, but we have gone too far down that road to turn back now.” Whether that statement is accurate or not depends very much upon the actions of the air force leadership. If they are prepared to use CFAWC as it was originally intended as a “think tank” producing doctrine based on principles, theories, and professional practice supported by rigorous study and analysis, then RCAF doctrine might free itself from its self-imposed restraints. Otherwise, you might want to avert your eyes from the RCAF’s doctrine making process.

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NOTES

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The Canadian Armed Forces Snowbirds fly over NASA's Kennedy Space Centre in Cape Canaveral, Florida, 9 May 2018.

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