



The Mainguy Report Still Relevant at 75: A Design-Thinking Approach

Lieutenant-Commander G. Scott Dyson

JCSP 50

Exercise Solo Flight

Disclaimer

Opinions expressed remain those of the author and do not represent Department of National Defence or Canadian Forces policy. This paper may not be used without written permission.

© His Majesty the King in Right of Canada, as represented by the Minister of National Defence, 2024.

PCEMI n° 50

Exercice Solo Flight

Avertissement

Les opinions exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite.

© Sa Majesté le Roi du chef du Canada, représenté par le ministre de la Défense nationale, 2024.

Exercise Solo Flight – Exercice Solo Flight

The Mainguy Report Still Relevant at 75: A Design-Thinking Approach

Lieutenant-Commander G. Scott Dyson

“This paper was written by a candidate attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence.”

« La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale. »

The Mainguy Report Still Relevant at 75: A Design-Thinking Approach

The contemporary Royal Canadian Navy (RCN) is facing a situation that is very similar to the post-war RCN in the years between 1945 and 1949. The fleet is in a period of reconstitution and rebuilding, which has only been seen before in the immediate post-war period. The introduction of at least three new classes of ship, the Harry De Wolf class Arctic Offshore Patrol Ships (AOPS), the Protecteur class Joint Support Ships (JSS), and the new, yet to be named, class of Canadian Surface Combatants (CSC) in the next ten years will be the beginning of a complete replacement of our existing fleet. There are also potential projects for the replacement of the RCN's submarine fleet, the Kingston class Maritime Coastal Defence Vessels (MCDVs). In anticipation of this new fleet, the RCN has begun reviewing all of its occupations and force structure. Simultaneously to this change, the RCN is struggling with retention and recruiting and will ideally be seeing a period of rapid growth. The Canadian Armed Forces (CAF) has been asked to reduce its budget and has sought savings from every element. This era has many parallels to the post-war period. Disturbingly, in 1949, there were three separate incidents of mass disobedience in the RCN. These mutinies created concern amongst the country's leadership and resulted in a commission to investigate the incidents and make recommendations on how to prevent future incidents. The resulting report became known as the "Mainguy Report." The "Mainguy Report" has become part of the RCN's culture, serving an essential role in shaping leadership in the Navy.

*The Mainguy Report. Its trim length of 57 pages notwithstanding, it remained for nearly 50 years the most incisive examination of a military institution to be undertaken in Canada. It exposed the hardship of general service conditions, described a number of factors critical to achieving good officer/man relations, and outlined a blueprint for reform. Its impact was immediate, and it deserves its description as "a remarkable manifesto" and "a watershed in the Navy's history." Still taught to new recruits of all ranks, and the continuing subject of staff college analysis, the report's findings, recommendations and conclusions remain a potent legacy.*¹

This paper will be yet another staff college analysis of the "Mainguy Report". Hopefully, the addition of a design thinking approach will be novel. However, the report has been critiqued, and given its age, questions could be raised regarding its continued value, except as a cultural artifact.

To avoid future mutinies or job actions like the three incidents documented in the "Mainguy Report", to reduce attrition from the navy, and to improve recruitment, the RCN should use the recommendations from the historical report to create a new campaign plan to prepare the Navy for success in the tumultuous period ahead. To prove this, we will first examine the history and character of Mutiny in the RCN. Then, a brief overview of the three incidents and the main findings and recommendations from the report. This will be followed by examining the critiques of the "Mainguy Report's" findings. Once the review is completed, the status of the

¹ Howard Coombs and P R Hussey, *The Insubordinate and the Noncompliant: Case Studies of Canadian Mutiny and Disobedience, 1920 to Present* (Toronto, CANADA: Dundurn Press, 2008), 209, <http://ebookcentral.proquest.com/lib/cfvlibrary-ebooks/detail.action?docID=5104815>.

RCN will be discussed, including issues with recruiting and retention. With an understanding of the past and the contemporary scenarios in place, the recommendations from the original report will be examined to determine whether they are still relevant. This paper will then discuss how the recommendations could be used to create an RCN to reflect contemporary society in Canada using design thinking. With this completed, the remaining recommendation will be placed in a “Seven Foundations” model to describe how the RCN could plan the changes required to improve overall morale within the force and to incidentally address recruiting and retention issues. Before the conclusion, a brief discussion of the change management tools that could be implemented will be included.

Background

The RCN of 1949 had gone through a period of demobilization that saw the force reduced to 5000 personnel and five ships² from its wartime strength of over 400 ships. “At the end of the war, the RCN was the fourth-largest fleet in the world—behind only those of the U.S., Great Britain, and the Soviet Union—with more than 400 warships.”³ This rapid reduction of fleet and establishment, followed by a period of rapid growth, created predictable tensions within the RCN. “Such growth and reduction need no verbal comment. Every such process must have its accompanying stresses and pains.”⁴ These tensions came to a peak in 1949, in quick succession, three RCN ships faced incidents of insubordination that would be later considered mutiny.” The first incident occurred in HMCS ATHABASKAN, on 26 February 1949, in Manzanillo, Mexico, when 92 sailors locked themselves in their mess in protest against conditions onboard.⁵ The second incident occurred in HMCS CRESCENT, on 15 March 1949, alongside in Kian-Chang, China, when 83 sailors locked themselves in a mess deck in protest. The third incident occurred in HMCS MAGNIFICENT, on 20 March 1949, off Colon Spain, when 32 sailors refused to conduct cleaning stations and follow other orders in protest against their treatment onboard.⁶ Because the incidents transpired in suspiciously rapid succession, they seized the attention of a government and a nation growing sensitive to the spread of communist influence.⁷ There had been previous incidents of Mutiny in the RCN that had mostly escaped notice; two of the most important were in HMCS IROQUOIS and HMCS ONTARIO. The incident in IROQUOIS was the most significant mutiny in RCN history, with 190 sailors taking part, and it was perhaps the largest in WWII. The IROQUOIS incident occurred 19 July 1943, in Plymouth, U.K., when 190 sailors locked themselves in their messes in protest against the Captain’s treatment of the ship’s company.⁸ The incident in HMCS ONTARIO occurred 22

² Coombs and Hussey, 268.

³ “Royal Canadian Navy - WWII, Ships, History | Britannica,” accessed May 6, 2024, <https://www.britannica.com/topic/Royal-Canadian-Navy/Second-World-War>.

⁴ Rear-Admiral E R Mainguy, L C Audette, and Leonard W Brockington, “Made to the Minister of National Defence by a Commission Duly Appointed for the above Purposes and Consisting Of:,” n.d., 8.

⁵ Mainguy, Audette, and Brockington, 14.

⁶ Mainguy, Audette, and Brockington, 14.

⁷ Coombs and Hussey, *The Insubordinate and the Noncompliant*, 209.

⁸ “Matelots, Martinets, and Mutineers: The Mutiny in HMCS Iroquois, 19 July 1943 - ProQuest,” 90, accessed May 1, 2024, <https://www.proquest.com/docview/195615537?parentSessionId=FWIW751gd04OQqoOXEYIT3cIX99gWSf%2BV2rzWijYFBk%3D&pq-origsite=summon&accountid=9867&sourcetype=Scholarly%20Journals>.

August 1947, at anchor off Nanoose, B.C., when 50 sailors locked themselves in their messes.⁹ In these five incidents, there were very few consequences for the insubordinate sailors, and in each case, their demands were partially met.” It is also noted that in none of the incidents was any punishment given for the “mutinous” acts.”¹⁰ This was made possible in 4 cases by careful handling by the ship’s captains, which avoided creating a sense that there was an actual mutiny vice mass insubordination.” The officers concerned handled their men with humanity and in the opinion of the highest officers of the Navy, with wisdom and perfect propriety.”¹¹ However, the “Mainguy Report” was eventually clear that these events were indeed mutinies, “The incidents which we were asked to investigate were technically “mutinies”, although apart from the barring of mess decks doors in Athabaskan and Crescent, no force was used. Nor was there any open defiance of a high officer’s order.”¹² While the report commended the humane handling of these incidents, it recommended against letting insubordination go unpunished, “In future, insubordination should be most severely punished.”¹³

The report in question, titled the “REPORT on certain “Incidents” which occurred on board H.M.C. Ships ATHABASKAN, CRESCENT and MAGNIFICENT and on other matters concerning THE ROYAL CANADIAN NAVY,” was prepared by three commissioners, Rear-Admiral E.R. MAINGUY, R.C.N., Chairman L.C. AUDETTE, Esquire, Commissioner LEONARD W. BROCKINGTON, Esquire, Commissioner, appointed by the federal government to investigate the incidents and other issues within the RCN. Their mandate was:

...to find out and record what happened on the occasion of each of the incidents of alleged mass insubordination which occurred in the three ships concerned. We were further instructed to make appropriate recommendations, if we reached the conclusion that there were things which could and should be done to improve conditions of service, the relations between officers and men, the machinery for the ventilation of grievances and other collateral matters. We were also asked to consider whether there should be changes in regulations, conditions of service, and the training of naval personnel.¹⁴

The commission was held in Halifax, Esquimalt, and Vancouver. It also visited the U.S. Navy establishments in Seattle, Washington, and met in Ottawa at Canadian Naval Headquarters. The commissioners heard from a wide range of witnesses. They initially started their proceedings by meeting the ships involved when they returned to port. The report includes a summary of the methods employed. The final report was 57 pages long and made a wide range of findings and recommendations. The commissioners enumerated 23 causes for the mutinies, made 14 observations on general conditions, and made 30 recommendations for changes to the RCN to address the causes. This list of recommendations. Figure 1 is the primary focus of this paper, as it will be argued that they can both serve as an excellent stern mark and a guide to designing how

⁹ Mainguy, Audette, and Brockington, “Made to the Minister of National Defence by a Commission Duly Appointed for the above Purposes and Consisting Of:” 30.

¹⁰ Mainguy, Audette, and Brockington, 31.

¹¹ Mainguy, Audette, and Brockington, 31.

¹² Mainguy, Audette, and Brockington, 56.

¹³ Mainguy, Audette, and Brockington, 56.

¹⁴ Mainguy, Audette, and Brockington, 5.

the RCN of the future will treat its sailors and officers. Some of them are obsolete or well-handled, but most remain valid in some manner.

Recommendation	Still Relevant
Initial Recommendations	Yes
Training Ships	Yes
Recruiting	Yes
Communal Entry	Yes
New entry Training	Yes
Royal Roads	Yes, replaced with RMC and NOTC
Training of Chiefs and P.O.'s	Yes
Change to Civilian Clothes on Going Ashore	No, walking out dress updated.
Canadian Naval Service Benevolent Trust Fund	Yes
Confidential reports on Officers and Men	Yes
Laundries	No, addressed.
Living Conditions in Ships	Yes, but issues have changed
Barracks and Married Quarters	Yes, housing crisis
Administration Generally	Yes
Announcement of Policy	Yes, see leaks of policy.
Liquor on Board Ship	No, dealt with.
Upkeep Allowance	No, most uniform items issued and replaced free of charge.
Free Transportation	No, Leave Travel Assistance is in place

Medical Care	Yes, CAF medical system is backlogged, and provincial system for dependents equally backlogged.
Dependent's Allowance	Yes, doesn't exist.
Pay for Good Conduct Badges	No, badges eliminated on unification.
Responsibility Allowance	No, Specialist Pay, Dive Pay, and Sea Pay.
Welfare Committees	Yes, current ships committee is mainly concerned with recreational issues.
Ship's Routine	Yes, new ship's routine introduced to reduce fatigue when possible.
Officer-Man Relationships	Yes, will remain an issue as long as there is a distinction.
Training in "The Humanities"	Yes, an updated version could be examined.
Canada Badges	No, distinctive uniform with Canada Badges etc...
Income Tax	Yes, while shipboard rations are not taxed other allowances are.
Recreational Facilities Afloat	Yes, perpetual.
Recreational Facilities Ashore	Yes, base facilities closing, new hobbies in style.
Films at Sea	Yes, but replaced with other forms of recreation.

Figure 1.

The report's recommendations and observations were not universally accepted and have been criticized. These criticisms are valid; however, they don't negate many of the valuable insights in the report. For example, the "Mainguy Report" has been criticized for focusing too much on issues like the lack of Canada patches on the RCN's uniforms or the culture gap between the officers and sailors in the RCN. In Keith D. Callow's paper, he argues that "the idea that there was a groundswell of nationalist sentiment in the RCN, and particularly on the lower deck, that required a break with Britain is incorrect. In fact, the RCN had been attempting to address morale issues for at least the two years prior to the "incidents" and had a very good idea of the issues that had to be dealt with."¹⁵ He argues that a distinct Canadian culture wasn't at issue, but rather general issues regarding welfare in RCN ships. Dr. Gimblett contends that the report also ignored a tradition of mutiny inherited from the RN. "The earliest recorded episode of

¹⁵ Keith D Calow, "A Sickly Season: The Royal Canadian Navy and the Mainguy Commission," n.d., 3.

mass disobedience in the RCN was in the destroyer Skeena, in January 1936.”¹⁶ By the end of WWII sit down strikes had become a tool of dissatisfied RCN sailors:

*By the end of the Second World War, therefore, there had evolved a distinct pattern to the massed expression of protest in the RCN. The lock-ins – or ‘sit-down strikes’ as Tucker styled them – were spontaneous displays, precipitated by some local event and undertaken with a view to attracting the attention of immediate superior officers to a problem the sailors believed was within the power of those superiors to correct.*¹⁷

This style of mutiny had been inherited from the Royal Navy, where many RCN officers and sailors had completed part of their training.

*The tradition of mutiny in the Canadian Navy, as such, was very much in keeping with that of the service from which the RCN derived so much else of its heritage. How much of this particular aspect did Canadian sailors (and their officers) derive from direct experience serving in RN ships during the interwar years is hard to determine.*¹⁸

The RCN has a history of mutiny, which started before the WWII, continued through the war, and persisted afterwards, not in the theatrical style, but more of a work stoppage until demands are met or at least acknowledged. “In a dozen recorded incidents in as many years, from 1936 to 1947, captains of Canadian warships became familiar with the fateful phrase, “The men won’t come out, sir!””¹⁹ This cultural transfer may also be indicative of both countries’ history of liberal democracy. Mutiny at sea is not unique to the RN and RCN and has historically been a tool for sailors to fix their grievances. “Mutiny tends to be a very successful means of achieving the basic objectives of the majority of participants, so much so that it is probably strange that it does not occur more frequently.”²⁰ Despite these issues with the “Mainguy Report,” the findings of the committee painted an otherwise accurate picture of the conditions in the fleet that triggered these mutinies, and it made numerous recommendations on how to improve conditions in the fleet—a summary of these are represented in Figure 1. Dr. Gimblett concludes his article with another significant lesson for CAF officers, “If there is a ‘lesson’ in this sad history, it is that, as the Canadian Forces embarks upon its own agenda of reform, we must do so in honest appreciation of all the pertinent factors.”²¹

There are strong parallels between the post-war RCN and the contemporary RCN: personnel shortages, older ships, pressure to grow, introduction of new classes of ships, and an

¹⁶ “What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ in The Royal Canadian Navy Before 1949,” 3, accessed April 29, 2024, https://navalmarinearchive.com/research/pdf/mainguy_report.pdf.

¹⁷ “What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ in The Royal Canadian Navy Before 1949,” 3.

¹⁸ “What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ in The Royal Canadian Navy Before 1949,” 7.

¹⁹ “What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ in The Royal Canadian Navy Before 1949..”

²⁰ Christopher Bell and Bruce Elleman, *Naval Mutinies of the Twentieth Century: An International Perspective*, Cass Series--Naval Policy and History (London: Routledge, 2003), 222, <https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=116290&site=ehost-live&scope=site>.

²¹ “What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ in The Royal Canadian Navy Before 1949,” 8.

uncertain geopolitical situation. The contemporary RCN is currently in the midst of its own polycrisis, a time of great disagreement, confusion, or suffering that is caused by many different problems happening at the same time so that they together have a very big effect²². The RCN is understaffed²³, it is struggling to retain members²⁴, it is struggling to recruit members, its ships are old, its operational tempo is increasing; while three, at least, new classes of ship are being introduced²⁵, at least two more classes need replacements or a decision on divestment and the world is in the midst of a polycrisis^{26,27}. In the past year, 2023, the Commander of the RCN, Vice Admiral Topshee, has spoken out about the RCN's ongoing crisis. Most notably in a YouTube video²⁸ that was released to the public. When asked about the current situation in the RCN he responded:

*It's a generational challenge. I didn't actually go and start my Navy training until the summer of '96 [after getting his Master's degree]. So I joined just as we were in the middle of taking delivery of the Halifax class. I joined a Navy that was excited to be delivering and using a brand-new fleet. [The next comparable moment in the Navy's history] is 10 years away from right now. [In the '90s,] all of a sudden, we were a world-leading Navy, again, you know, the first Navy to integrate fully into American carrier battle groups, because we could operate on par or better than American escort ships. So I think part of the message of the video is, look, we are in a tough place right now. In a perfect world, we wouldn't be here. But we are. So, rather than complaining about the fact that we are where we are, we need to start fixing the problems.*²⁹

The RCN's problems were discussed earlier in the interview, as well as the challenges of maintaining an ageing fleet, recruiting shortfalls, and retention issues in the RCN's technical trades.³⁰ These issues echo the Mainguy Report,

²² "POLYCRISIS | English Meaning - Cambridge Dictionary," accessed May 4, 2024, <https://dictionary.cambridge.org/dictionary/english/polycrisis#>.

²³ "Canada's Navy Doesn't Just Have a Recruitment Crisis. It Also Has a Retention Problem - ProQuest," accessed May 1, 2024,

<https://www.proquest.com/docview/2907683530?parentSessionId=%2B7i8lQgxZgEdt9rBqQMolvzn7NMLSTk9Zn9VR4GGQs%3D&pq-origsite=summon&accountid=9867&sourcetype=Newspapers>.

²⁴ Major Kim A Bériault, "Retention in the Canadian Armed Forces: A Complex Problem That Requires Active and Continued Management," n.d.

²⁵ Public Services and Procurement Canada Government of Canada, "Canadian Surface Combatant - Large Vessel Shipbuilding Projects – Shipbuilding Projects to Equip the Royal Canadian Navy and the Canadian Coast Guard – National Shipbuilding Strategy – Sea – Defence and Marine Procurement – Buying and Selling – PSPC," May 3, 2019, <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/navcom-surfcom-eng.html>.

²⁶ "Global Polycrisis: The Causal Mechanisms of Crisis Entanglement - ProQuest," 5, accessed May 5, 2024, <https://www.proquest.com/docview/2925387931?parentSessionId=d9ANSS0tj62JatxG7jlxm7B2xqjN61xlqf1%2FWo3hIDI%3D&pq-origsite=summon&accountid=9867&sourcetype=Scholarly%20Journals>.

²⁷ "We're on the Brink of a 'Polycrisis' – How Worried Should We Be?," World Economic Forum, January 13, 2023, <https://www.weforum.org/agenda/2023/01/polycrisis-global-risks-report-cost-of-living/>.

²⁸ *The State of the Royal Canadian Navy | L'état de La Marine Royale Canadienne*, 2023, <https://www.youtube.com/watch?v=FuD6Q1HXsKw>.

²⁹ Paul Wells, "A 'Generational Challenge' in Naval Readiness," Substack newsletter, *Paul Wells* (blog), November 30, 2023, <https://paulwells.substack.com/p/a-generational-challenge-in-naval>.

³⁰ Wells.

The present actual complement of officers and men was stated by several witnesses to be inadequate for the exiting commitments and tasks of the Navy, if it is to concentrate on training, as it must do. It was suggested that officers and senior ratings who are qualified to train their fellows are of necessity employed in "Operations": there is little time to pause and "take up the slack", because the number of men available for all essential purpose is inadequate.³¹

While there was direction that the CAF as a whole should be working towards reconstitution as outlined in the "CDS/DM Directive For CAF Reconstitution", "we will undertake a concentrated period of reconstitution to ensure the long-term viability and readiness of the CAF to fulfill GC priorities, while concurrent efforts are undertaken to position, modernize and digitalize Defence in response to new and emerging threats."³² While ordered to grow its force and reconstitute the RCN has been ordered to increase its operational output in support of the new Indo-Pacific Strategy. The CAF has been directed to "augment its naval presence, including by increasing the number of frigates deployed on to the region where it will conduct forward naval presence operations, uphold international law of the sea including the UN convention, and conduct collaborative deployments with its allies and partners."³³ The RCN is the only element of the CAF that was directed to deliver a specific capability, increasing the number of frigates, in the government's Indo-Pacific Strategy. Yet another parallel with the post-war RCN. The Mainguy report described the RCN situation after WWII:

The comparatively heavy commitments of the Navy have required constant operation and hurried change. It is not, therefore, surprising that training has not gone ahead as fast, as thoroughly and as systematically as it would have done if the Navy, after World War II, had retained its 1939 status as a small Navy, concentrating as it used to do on a "proper training system". Such a retention of status is obviously impossible. It would have been contrary to the wishes of the Canadian people and a betrayal of our national promises, in a world not yet at peace and still restless beneath the threat of War.³⁴

This last excerpt from the report demonstrates the parallels between the situation in the post-war RCN and the RCN's current situation. It also concludes the introduction of this paper. The history of mutiny/job action in the RCN has been discussed, as well as an overview of two previous incidents of mutiny in the RCN, HMC Ships IROQUIUS and ONTARIO, the three 1949 incidents, HMC Ships CRESCENT, MAGNIFICENT, and ATHABASKAN; the main findings of the "Mainguy Report" have been discussed, as well as critiques of the report, and finally we have examined the strong parallels between the RCN of 1949 and 2024. In the next

³¹ Mainguy, Audette, and Brockington, "Made to the Minister of National Defence by a Commission Duly Appointed for the above Purposes and Consisting Of," 34.

³² National Defence, "CDS/DM Directive for CAF Reconstitution," August 11, 2022, 3, <https://www.canada.ca/en/department-national-defence/corporate/policies-standards/dm-cds-directives/cds-dm-directive-caf-reconstitution.html>.

³³ Global Affairs Canada, "Canada's Indo-Pacific Strategy," GAC, November 24, 2022, <https://www.international.gc.ca/transparency-transparence/indo-pacific-indo-pacifique/index.aspx?lang=eng>.

³⁴ Mainguy, Audette, and Brockington, "Made to the Minister of National Defence by a Commission Duly Appointed for the above Purposes and Consisting Of," 34.

section, we will discuss the nature of the current problem, a wicked problem and polycrisis, and a method that would use the original Mainguy Report as a starting point of a design methodology to develop a campaign plan to guide the RCN to the future it deserves.

A Design Approach

The term wicked problem has been used earlier in this paper; this was done purposefully to indicate why a design approach should be taken to solve these issues. A wicked problem as defined by Rittel and Webber in *Dilemmas in a General Theory of planning*:

As described by Rittel and Webber, wicked problems have 10 important characteristics:

- 1) They do not have a definitive formulation.*
- 2) They do not have a “stopping rule.” In other words, these problems lack an inherent logic that signals when they are solved.*
- 3) Their solutions are not true or false, only good or bad.*
- 4) There is no way to test the solution to a wicked problem.*
- 5) They cannot be studied through trial and error. Their solutions are irreversible so, as Rittel and Webber put it, “every trial counts.”*
- 6) There is no end to the number of solutions or approaches to a wicked problem.*
- 7) All wicked problems are essentially unique.*
- 8) Wicked problems can always be described as the symptom of other problems.*
- 9) The way a wicked problem is described determines its possible solutions.*
- 10) Planners, that is those who present solutions to these problems, have no right to be wrong. Unlike mathematicians, “planners are liable for the consequences of the solutions they generate; the effects can matter a great deal to the people who are touched by those actions.”³⁵*

Addressing the dissatisfaction of the sailors of the RCN in 1949 and 2024 was and is a wicked problem. While the RCN’s issues with retention and recruiting might be symptom enough to indicate dissatisfaction within the ranks, there hasn’t been an apparent incident of mass insubordination to signal the RCN is in a crisis. There is a wicked problem to be solved; if you use the “Mainguy Report’s” 23 causes as an example of the complexity potentially involved in the current crisis, it is a wicked problem and fits all ten characteristics.

³⁵ “Dilemmas in a General Theory of Planning - ProQuest,” 161–66, accessed May 4, 2024, <https://www.proquest.com/docview/1307462270/405D99EA7BF8463EPQ/1?accountid=9867&sourcetype=Scholarly%20Journals&imgSeq=1>.

An additional factor that recommends a design approach to solving this problem is the complexity of the system, the RCN, involved. The RCN is a complex system, “a collection of elements whose connections create some sort of whole with its own qualities.” or “an interconnected set of elements that is coherently organized in a way that achieves something.”³⁶ The RCN also meets the additional criteria of a system, “a system must consist of three kinds of things: elements, interconnections, and a function or purpose.”³⁷ This paper won’t break down the RCN into its constituent parts. However, the RCN has a purpose, as stated on its public-facing website:

*The Royal Canadian Navy (RCN) protects Canadian sovereignty and interests at sea, at home and abroad. Whether during times of conflict or peace, the RCN promotes global stability, enforces international law and helps protect both the Canadian and world economies.*³⁸

The CRCN’s response when asked if previous governments had caused this problem illustrates the wickedness and interconnectedness of the current situation:

*There is no single cause, no single organization, no single entity that is responsible for where we are at right now. For example, the most significant challenge we face is with our marine technicians. And that is a problem of the Navy's own making because of how we managed that trade over the last decades. In a couple of cases, we made some mistakes. In a couple of places, some circumstances happened that we couldn't have predicted.*³⁹

Like many enduring systems, it has faced previous crises and is again facing a potential internal polycrisis or wicked problem.⁴⁰ While the “Mainguy Report” is 75 years old, it can provide the Navy a stern mark to assist in developing a forward-looking strategy. “Study of the circumstances of The Mainguy Report, however, serves in several different ways to illustrate that, if the past is not hidden, it truly can be a distant mirror of the present.”⁴¹ This would be done by updating the recommendations from the original report and then incorporating those updated recommendations into a systems and design thinking approach to create a campaign plan to navigate the external and internal polycrisis successfully and to address multiple aspects of the Navy’s wicked problem simultaneously, therefore, avoiding the issues of applying a linear solution to a wicked problem.” By reducing the complexity of a system to a linear chain of actions and outcomes, leaders may fail to recognize hidden complexity that can stand in the way of results.”⁴² This paper is in no way arguing that we are in danger of seeing future mutinies in

³⁶ “Thinking in Systems - Canadian Forces College - OverDrive,” Canadian Forces College, 23, accessed May 5, 2024, <https://cfc.overdrive.com/media/1970343>.

³⁷ “Thinking in Systems - Canadian Forces College - OverDrive,” 23.

³⁸ “Royal Canadian Navy,” November 28, 2022, <https://www.canada.ca/en/navy.html>.

³⁹ Wells, “A ‘Generational Challenge’ in Naval Readiness.”

⁴⁰ Mark McQueen, “RCN ‘Facing Some Very Serious Challenges,’ Says Commander,” Substack newsletter, *MARK MCQUEEN’S BLOG* (blog), December 5, 2023, https://markmcqueen.substack.com/p/rcn-facing-some-very-serious-challenges?utm_medium=reader2.

⁴¹ “What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ In The Royal Canadian Navy Before 1949,” 2.

⁴² Ryan J. A. Murphy and Peter Jones, “Towards Systemic Theories of Change: High-Leverage Strategies for Managing Wicked Problems,” *Design Management Journal* 16, no. 1 (2021): 49–65, <https://doi.org/10.1111/dmj.12068>.

the RCN; the consequences of ignoring the current situation will present themselves in continued retention, recruiting, wellness, and readiness issues.

These trends suggest that major naval mutinies are probably a thing of the past for Western, democratic states. Today's all-volunteer forces enjoy greatly improved conditions of service compared to their predecessors of even 30 years ago. They have access to clearly delineated and generally efficient channels for seeking the redress of grievances, in addition to a range of informal means to make their complaints known to higher authorities. When this is combined with institutionalized checks and balances, such as the practice of outside inspections, there appear to be few problems that existing 'systems' will not be able to handle.⁴³

Contemporary sailors will release vice mutiny and may tell their friends, impacting attempts to recruit new sailors. Social media has also created a new dimension that may act as a release valve for tension but allows a broad audience to see the problems in the RCN, which may discourage people from joining. The following three Instagram posts are included as examples. Please see Figures 2, 3 and 4.

⁴³ Christopher Bell and Bruce Elleman, *Naval Mutinies of the Twentieth Century*, 227.



Figure 2⁴⁴

⁴⁴ “@depressedstokermemes • Instagram Photos and Videos,” accessed May 7, 2024, <https://www.instagram.com/p/C6gz1MTrgi3/>.



Figure 3⁴⁵

⁴⁵ “@depressedstokermemes • Instagram Photos and Videos,” accessed May 5, 2024, <https://www.instagram.com/p/C6MwcZup3uG/>.



Figure 4⁴⁶

These figures illustrate how social media's anonymity has provided RCN sailors with a way to voice what they feel are issues or concerns in the RCN, some lighthearted and others deadly

⁴⁶ "Faceless Subbies (@subparsubbies) • Instagram Photos and Videos," accessed May 5, 2024, https://www.instagram.com/p/CeBsAF6r1XO/?img_index=1.

serious. They are also now very public and have an audience inside and outside the RCN. While they may also serve as a safety valve, they are further proof that the RCN has a new crisis.

Now that the RCN’s current problem and its wickedness have been established and the complexity of the RCN as a system has been briefly discussed, this paper will examine how design thinking could be used to address the problem. Fortunately, the recommendations from the “Mainguy Report,” while 75 years old, can provide the RCN with a starting point to address its current issues. A key element of design thinking is examining the past to look for insights into the future. For the purpose of this paper and a demonstration of a design tool that could be used by the RCN, The Seven Foundations of World Building will be discussed and demonstrated. The RCN could also employ Alternative Analysis with support from the Warfare Center’s Alternative Analysis practitioners or use the Breakaway methodology developed by the Archipelago of Design for the CAF’s use. The Breakaway model explains how the “Mainguy Report” would be valuable for a design effort working to address the RCN’s current crisis. Understanding the distant and immediate past, combined with understanding the current situation, will allow a design practitioner to forecast what is possible, plausible, probable and potentially anticipate what might happen.⁴⁷

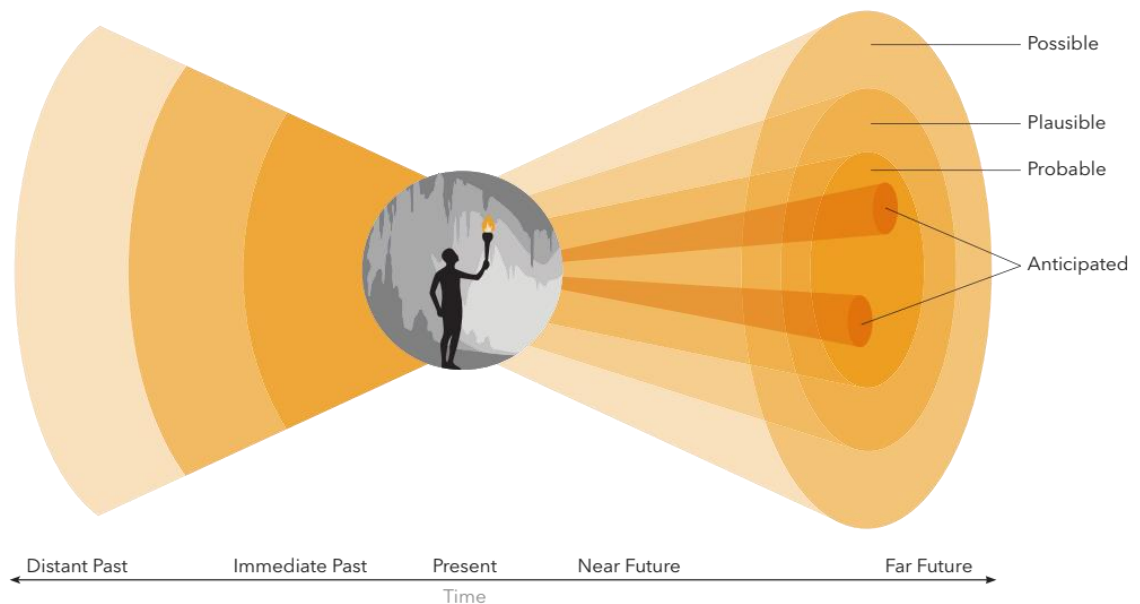


Figure 5: *The Cavern of Complex Environments*⁴⁸

The “Mainguy Report” is a snapshot of the RCN distant past, with a detailed analysis of the crisis it faced and prescriptions on how to fix them. These prescriptions have been studied, applied, and taught to RCN members since the report's release, becoming part of the RCN’s culture and, therefore, part of its recent past and present. The “Mainguy Report” was referenced

⁴⁷ “Breakaway: Reframing to Prevail – The Archipelago of Design,” 39, accessed May 7, 2024, <https://aodnetwork.ca/breakaway-reframing-to-prevail/>.

⁴⁸ “Breakaway,” 39.

in the 2013 Guide to the Divisional System,⁴⁹ and the updated 2022 Guide to the Divisional System; it has been a critical reference in all previous versions. Therefore, in a design effort examining the RCN, it is a critical element of the past.

With its importance established, how exactly will it fit into the 7 Foundations of World Building? Leah Zaidi created this tool to assist authors and designers in world-building. For authors, it can help them build a world in which to set their stories, and for designers, it can assist in forecasting by creating future worlds based on current signals, or it can be used to develop a campaign plan to create a desired world. For this paper the tool will be examined to show how it could be used to envision the RCN of the future and how that could state be used to create a campaign plan to address the current wicked problem.

*Many of us have, at some point in our lives, asked if there is a time or place better than the one we find ourselves in — that this cannot be all that there is or the best that we can do. And when we grow dissatisfied, we may look for an escape — someday out of our reality, sometimes seeking a world brighter than our own, other times a world in darkness so that we may better appreciate ours.*⁵⁰

While the tool could be used to create a darker vision of the RCN's future, this paper will only look at positive changes. Something similar to this model has been successfully used in business,

Borrowing from religion's penchant for storytelling, Japanese multinational, Panasonic, staged a dramatic recovery by employing a narrative strategy in the early 2000s (Ogilvy, Nonaka, Konno, 2014).³ Alternative scenarios, themes of creation and destruction, and a series of messages, such as 'Refound the company every day', were introduced to shift mindsets and behaviours away from a culture of copying competitors, towards becoming a 'super-manufacturer' (Ogilvy, Nonaka, Konno, 2014).⁵¹

Zaidi has selected the foundations of Social, Political, Economic, philosophical, Environmental, Scientific and technological, and Artistic. All societies or organizations integrate these components in some way. The RCN could certainly be seen to have all seven.

*The intention behind this model is to strip civilization down to its foundations and address what is most fundamental to the reality we have created for ourselves. It is a superstructure or a mental model for culture and/or society. For instance, not every civilization will take the same approach to politics (e.g. a monarchy versus a democratic republic versus a council of elders, etc.) but every civilization has engaged in some form of politics or another.*⁵²

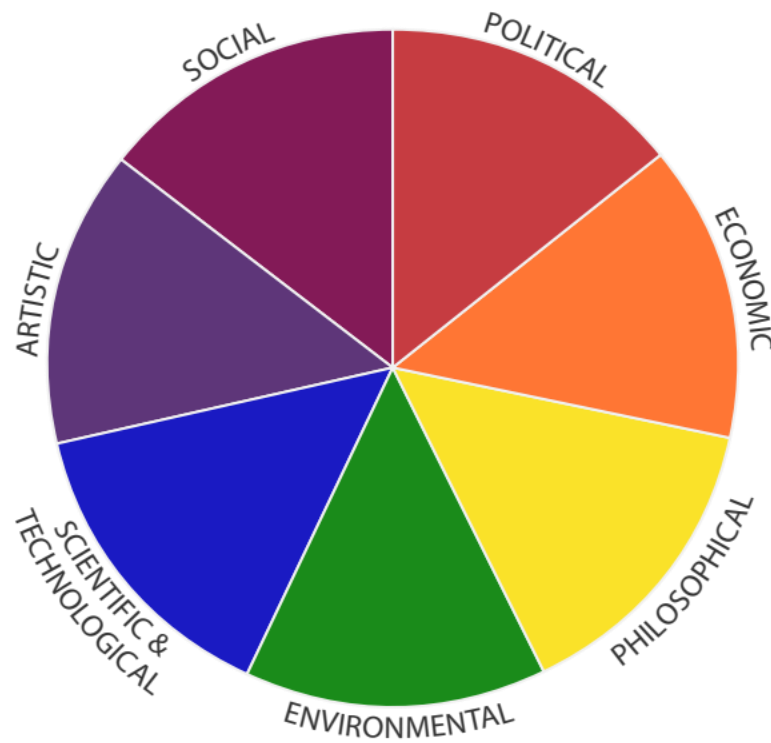
⁴⁹ "Guide-to-the-Divisional-System.Pdf," accessed May 7, 2024, <https://www.amphion.ca/wp-content/uploads/2016/03/Guide-to-the-Divisional-System.pdf>.

⁵⁰ Leah Zaidi, "Building Brave New Worlds: Science Fiction and Transition Design" (2017), 2.

⁵¹ Zaidi, 7.

⁵² Zaidi, 45.

She selected the circular design of the model to symbolize a complete and balanced world. It encourages the user to move from one foundation to another to achieve a coherent outcome, in which the foundations work together to create a harmonized whole.⁵³ Figure 6 is the essential model, that could be used to describe a society or organization—by filling in the sections of the diagram with elements from each foundation.



*Figure 6: Seven Foundations of Worldbuilding, Essential Version*⁵⁴

Figure 7 is an example using the model to describe the public education system.

⁵³ Zaidi, 48.

⁵⁴ Zaidi, 44.

PUBLIC SCHOOLS (EDUCATION SYSTEM)



Figure 7: Seven Foundations Example Public Education⁵⁵

Using this model to describe the RCN's current situation would be the first step in employing the Seven Foundations. The recommendations from the “Mainguy Report” would provide some guidance for what could go in each sector of the diagram. Describing the current situation would be of limited use and would be followed by building the Seven Foundations Incremental Version--. This tool would be used to describe the desired future.

⁵⁵ Zaidi, 53.

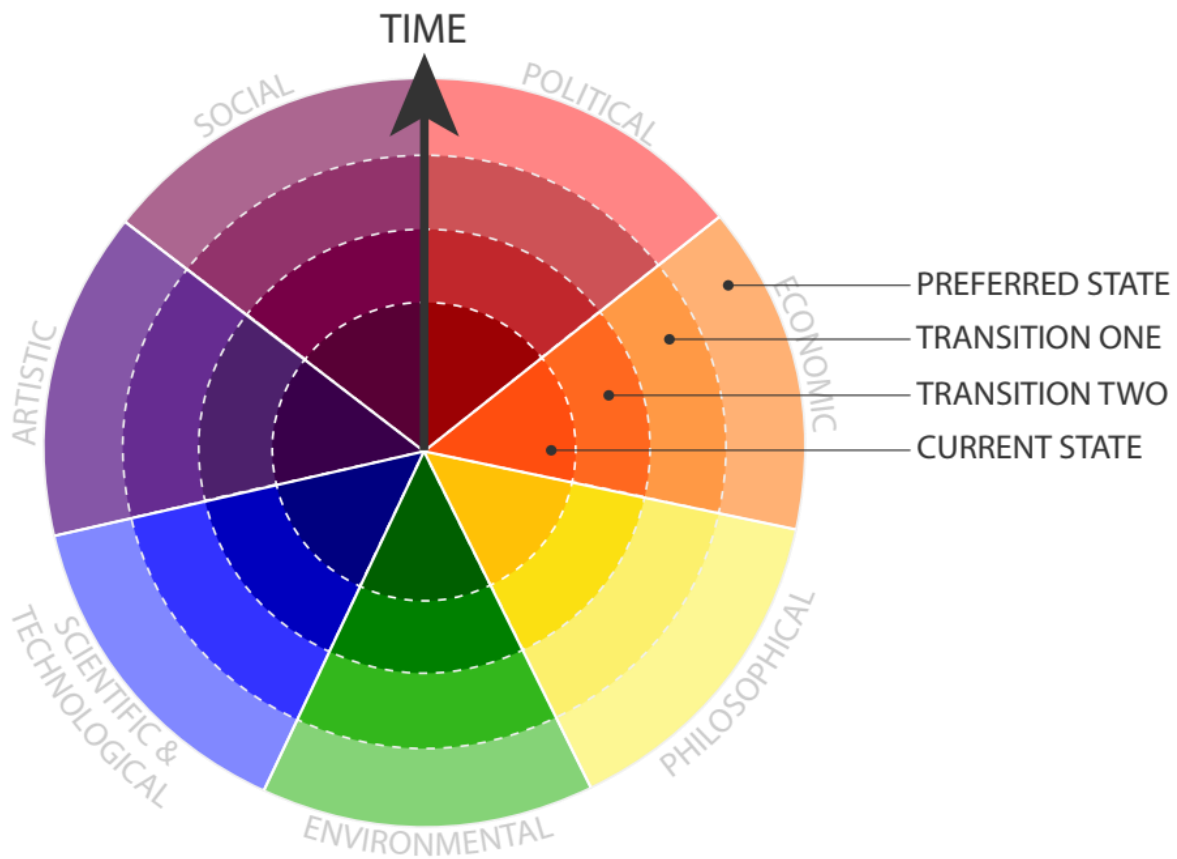


Figure 8: Seven Foundations of Worldbuilding, Incremental Version⁵⁶

With the present state filling the center and the desired state filling the outer ring, the user would then backcast, the opposite of forecast, from the desired state to the present to work out each transition state—Figure 9.

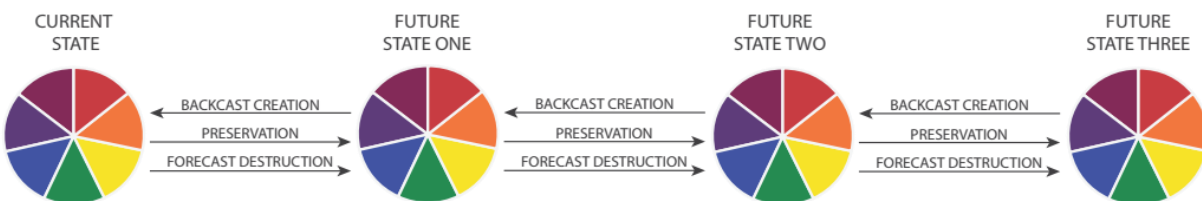


Figure 9: Systemic Foundations Transitions⁵⁷

For example, the current condition of housing in the RCN’s two bases could be placed in the economic sector of the model. The current state would be “insufficient base housing for families,” and the desired end state would be “adequate housing available for all families of all

⁵⁶ Zaidi, 44.

⁵⁷ Zaidi, 52.

ranks.” For ease, we will only use one transition state, “housing available for all NCM families requiring housing.” This would be repeated with each item. The ship’s welfare committee could be another example of distinct Canadian culture. Figure 10 is a model with some examples.

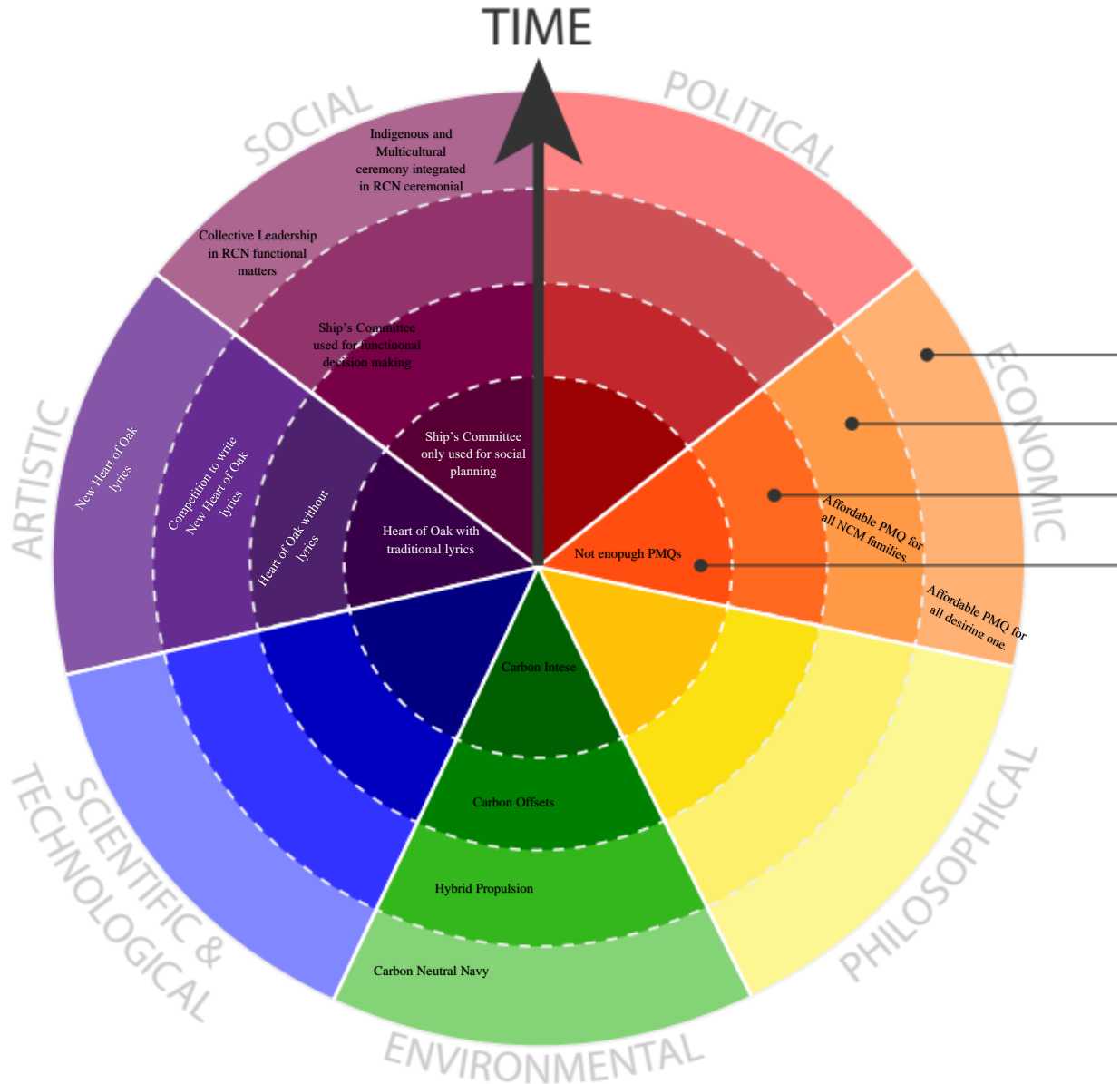


Figure 10: Demonstration RCN Incremental

The “Mainguy Report” and all its recommendations would provide an RCN design team with a good starting point to build out the RCN’s Seven Foundations Model. Once this was completed, it could be adapted into a campaign plan using each foundation as a line of effort and each transition state as a set of decisive points. These lines would be executed simultaneously, which would avoid the issues presented by tackling a wicked problem with linear tools.

As changemakers who want to leverage worldbuilding practices for Transition Design, we must document both the collective preferred states that we create, as well as the process by which we arrive at those states. Worldbuilding is a process, and the worlds we envision — the futures and systems they are comprised of — are outcomes.⁵⁸

This model would allow the RCN to design its desired future state addressing its sailor's concerns, and all of the other demands placed on the institution, while also developing the processes required to move from the present state to each transitional state. Zaidi's work also delves into the theory of how revolts and revolutions happen:

Our real-world systems have not been designed with coherence and balance in mind. Much of our reality has emerged with little to no foresight. As a result, our systems are out of balance. The political and economic foundations take precedence over the rest, and continue to receive privilege in the face of growing complexity and uncertainty. When a living system is out of balance, it experiences a revolt.⁵⁹

The primary intended use for the Seven Foundations model is Transition Design. It combines the foresight, systems, and futures-based narratives aspects of Transition Design to envision radically new images of the future and the pathways required to reach those preferred states.⁶⁰

The model's creator also considered possible secondary use cases and employment in policy and systemic design. In the primary and secondary use cases the Seven Foundations model, when combined with the findings from the "Mainguy Report," would provide a

Perhaps by incorporating her design methods into the design of the future RCN, we can establish a more balanced system, prevent future revolts, or reduce the number of biting comics produced by the RCN's sailors.

Future Research and Conclusion

The subject of this paper has the potential for further institutional and academic work. The "Mainguy Report" was the product of numerous hours of testimony, interviews, physical exhibits, and written submissions that were analyzed by the commissioners and eventually turned into a relatively concise document. An RCN staff also supported these commissioners. Any effort to update the recommendations included in the original report should be allocated similar resources. This work should be done. Once the update is completed, the results and recommendations should be combined with the original report to provide a starting point for a design effort using the Seven Foundations to design the desired future RCN. The complete Seven Foundations Incremental model could be then used to complete an RCN Campaign plan and an operations order/s to begin the desired transformations. Any analysis work that supports this effort should incorporate Gender-Based Analysis Plus, or its recommendations would quickly become irrelevant. To ensure that this campaign plan didn't end up like many other CAF initiatives, it should incorporate a change management plan.

⁵⁸ Zaidi, 37.

⁵⁹ Zaidi, 49.

⁶⁰ Zaidi, 61.

The original report included some elements that were criticized as potentially Irrelevant, but may have been some of the first moves toward multiculturalism within the RCN. The report recommended that the RCN move away from RN traditions to create more Canadian traditions in recognition of the RCN's more cosmopolitan makeup:

Our men also belong to many races. Very many of them are of the class and type and sometimes referred to as "New Canadians". They may not all respond to the inspiration of memories such as this: "The spirit of your fathers Shall start from every wave The deck it was their field of fame And ocean was their grave. Where Blake and mighty Nelson fell, Your manly hearts shall glow As ye sweep through the deep While the stormy winds do blow."⁶¹

the poem he quotes is called "ye mariners of england." This may be the first stirrings of intersectional analysis in the Navy. Another comment in the report hints at this as well. "Stephen Leacock once said, "Leave the Ukrainians alone, and in ten years they will think that they won the Battle of Trafalgar". Unfortunately, this genial prophecy has not been fulfilled..."⁶² These nationalist sentiments have been critiqued as unfounded, however in a contemporary perspective they seem to be ahead of their time.

The RCN is now facing a busy and complex future in a poly-crisis of its creation, trying to grow the Navy while keeping its aging ships at sea, incorporating new ships, recruiting new sailors, and training them while supporting increasing operational demands in a world on the brink of open conflict. However, there is an opportunity to use the past to guide us into our future, integrating valuable lessons learned. The Mainguy report had an enduring legacy that became part of the RCN's culture and is still providing material for academic reflection. Once appropriately updated, the number of still relevant recommendations can provide the RCN with a campaign plan that, if properly managed, will aid in creating the RCN of the future.

⁶¹ Mainguy, Audette, and Brockington, "Made to the Minister of National Defence by a Commission Duly Appointed for the above Purposes and Consisting Of," 44.

⁶² Mainguy, Audette, and Brockington, 33.

BIBLIOGRAPHY

- Bériault, Major Kim A. "Retention in the Canadian Armed Forces: A Complex Problem That Requires Active and Continued Management," May 2021. <https://www.cfc.forces.gc.ca/259/290/23/286/Beriault.pdf>
- "Breakaway: Reframing to Prevail – The Archipelago of Design." Accessed May 7, 2024. <https://aodnetwork.ca/breakaway-reframing-to-prevail/>.
- Calow, Keith D. "A Sickly Season: The Royal Canadian Navy and the Mainguy Commission," Fall 2016. <https://scholars.wlu.ca/etd/1878>
- Canada, Global Affairs. "Canada's Indo-Pacific Strategy." GAC, November 24, 2022. <https://www.international.gc.ca/transparency-transparence/indo-pacific-indo-pacifique/index.aspx?lang=eng>.
- Hansen, Ken. "Canada's Navy Doesn't Just Have a Recruitment Crisis. It Also Has a Retention Problem." *The Globe and Mail*, 31 December 2023. Accessed May 1, 2024. <https://www.theglobeandmail.com/opinion/article-canadas-navy-doesnt-just-have-a-recruitment-crisis-it-also-has-a/>
- Meadows, Donella. *Thinking in Systems*, Chelsea Green Publishing, 2008.
- Christopher Bell and Bruce Elleman. *Naval Mutinies of the Twentieth Century: An International Perspective*. Cass Series--Naval Policy and History. London: Routledge, 2003.
- Coombs, Howard, and P R Hussey. *The Insubordinate and the Noncompliant: Case Studies of Canadian Mutiny and Disobedience, 1920 to Present*. Toronto, Canada: Dundurn Press, 2008.
- Defence, National. "CDS/DM Directive for CAF Reconstitution," August 11, 2022. <https://www.canada.ca/en/department-national-defence/corporate/policies-standards/dm-cds-directives/cds-dm-directive-caf-reconstitution.html>.
- "@depressedstokermemes • Instagram Photos and Videos." Accessed May 7, 2024. <https://www.instagram.com/p/C6gz1MTrgi3/>.
- "@depressedstokermemes • Instagram Photos and Videos." Accessed May 7, 2024. <https://www.instagram.com/p/C6MwcZup3uG/>.
- Rittel, Horst W.J. and Melvin M. Webber. "Dilemmas in a General Theory of Planning." *Policy Sciences* 4, Iss. 2.; Amsterdam Vol. 4, Iss. 2. (Jun 1, 1973) Accessed May 4, 2024.
- "Faceless Subbies (@subparsubbies) • Instagram Photos and Videos." Accessed May 7, 2024. https://www.instagram.com/p/CeBsAF6r1XO/?img_index=1.

“Global Polycrisis: The Causal Mechanisms of Crisis Entanglement - ProQuest.” Accessed May 5, 2024.

Government of Canada, Public Services and Procurement Canada. “Canadian Surface Combatant - Large Vessel Shipbuilding Projects – Shipbuilding Projects to Equip the Royal Canadian Navy and the Canadian Coast Guard – National Shipbuilding Strategy – Sea – Defence and Marine Procurement – Buying and Selling – PSPC,” May 3, 2019. <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/navcom-surfcom-eng.html>.

“Guide-to-the-Divisional-System.Pdf.” Accessed May 7, 2024. <https://www.amphion.ca/wp-content/uploads/2016/03/Guide-to-the-Divisional-System.pdf>.

Mainguy, Rear-Admiral E R, L C Audette, and Leonard W Brockington. “Made to the Minister of National Defence by a Commission Duly Appointed for the above Purposes and Consisting Of;” n.d.

“Matelots, Martinets, and Mutineers: The Mutiny in HMCS Iroquois, 19 July 1943 - ProQuest.” Accessed May 1, 2024.

McQueen, Mark. “RCN ‘Facing Some Very Serious Challenges,’ Says Commander.” Substack newsletter. *MARK MCQUEEN’S BLOG* (blog), December 5, 2023. https://markmcqueen.substack.com/p/rcn-facing-some-very-serious-challenges?utm_medium=reader2.

Murphy, Ryan J. A., and Peter Jones. “Towards Systemic Theories of Change: High-Leverage Strategies for Managing Wicked Problems.” *Design Management Journal* 16, no. 1 (2021): 49–65. <https://doi.org/10.1111/dmj.12068>.

“POLYCRISIS | English Meaning - Cambridge Dictionary.” Accessed May 4, 2024. <https://dictionary.cambridge.org/dictionary/english/polycrisis#>.

“Royal Canadian Navy,” November 28, 2022. <https://www.canada.ca/en/navy.html>.

“Royal Canadian Navy - WWII, Ships, History | Britannica.” Accessed May 6, 2024. <https://www.britannica.com/topic/Royal-Canadian-Navy/Second-World-War>.

The State of the Royal Canadian Navy | L'état de La Marine Royale Canadienne, 2023. <https://www.youtube.com/watch?v=FuD6Q1HXsKw>.

Wells, Paul. “A ‘Generational Challenge’ in Naval Readiness.” Substack newsletter. *Paul Wells* (blog), November 30, 2023. <https://paulwells.substack.com/p/a-generational-challenge-in-naval>.

“What The Mainguy Report Never Told Us: The Tradition of ‘Mutiny’ in The Royal Canadian Navy Before 1949.” Accessed April 29, 2024.
https://navalmarinearchive.com/research/pdf/mainguy_report.pdf.

World Economic Forum. “We’re on the Brink of a ‘Polycrisis’ – How Worried Should We Be?,” January 13, 2023. <https://www.weforum.org/agenda/2023/01/polycrisis-global-risks-report-cost-of-living/>.

Zaidi, Leah. “Building Brave New Worlds: Science Fiction and Transition Design,” 2017.