

Canadian Hansard and Arctic Sovereignty: A Narrative Policy Framework Study

Alexandre Millette^{1,2} and Mathieu Landriault¹

(Received 24 May 2024; accepted in revised form 19 March 2025)

APPENDIX A

TABLE A1. List of words used in thematic dictionary.

Environment and climate	Military and security	Indigenous People	Economy and resources
1. air	1. admiral*	1. abitibiwinnik	1. development
2. animal*	2. aggressi*	2. aboriginal	2. econom*
3. biodiversity	3. aircraft*	3. akeegok	3. employ*
4. carbon	4. airfield*	4. algonquin	4. energ*
5. change	5. alert	5. anishinabe	5. fuel*
6. changes	6. allies	6. atikamekw	6. fossil
7. climate	7. armament*	7. carmacks	7. gas
8. coast*	8. armed	8. colonial	8. industr*
9. conservation	9. arsenal	9. communities	9. infrastructure
10. ecolog*	10. ballistic	10. cree	10. invest*
11. ecosystem*	11. bases	11. dogrib	11. job*
12. endangered	12. battle*	12. gwich'in	12. mineral*
13. environment*	13. belligeren*	13. gwitchin	13. offshore*
14. fauna	14. border*	14. indigenous	14. oil
15. fish	15. china	15. innu	15. petroleum
16. fishery	16. chinese	16. inuit	16. producer*
17. fishes	17. coast	17. inuinnaqtun	17. resource*
18. fishing	18. combat	18. inuk	18. seabed
19. footprint*	19. conflict*	19. inuktitut	19. shelf
20. ghg	20. continental	20. inuvik	20. shipping
21. greenhouse	21. crime*	21. itk	21. spending
22. ice	22. defence	22. lyackson	22. supplies
23. lake	23. destabiliz*	23. listuguj	23. tanker*
24. lakes	24. drone*	24. katzie	24. trade
25. marine	25. equipment*	25. kinanaskomtinawaw	25. work
26. melting	26. extraterritorial	26. kwantlen	
27. nature	27. fleet	27. manawan	
28. ocean*	28. forces	28. matsqui	
29. sea	29. guard	29. métis	
30. seas	30. hypersonic	30. mi'kmaq	
31. species	31. icebreaker*	31. nations	
32. temperature*	32. incursion*	32. nanisivik	
33. traffic	33. intelligence	33. nasittuq	
34. transition	34. international	34. northerner*	
35. water	35. invasion	35. nunavummiut	
36. waters	36. jet*	36. nunavut	
37. waterway	37. kremlin	37. nunavik	
38. whale*	38. labrov	38. okanagan	
39. wildlife*	39. marine	39. packchi-wanis	

¹ École nationale d'administration publique, 4750 Avenue Henri-Julien, Montréal, Québec H2T 3E5, Canada

² Corresponding author: alexandre.millette1989@gmail.com

TABLE A1. List of words used in thematic dictionary – *continued*:

Environment and climate	Military and security	Indigenous People	Economy and resources
	39. marine	40. patriarchal	
	40. militar*	41. pauingassi	
	41. missile*	42. peguis	
	42. nato	43. pikogan	
	43. naval	44. reconciliation	
	44. navy	45. saanich	
	45. norad	46. semiahmoo	
	46. northwest	47. shamattawa	
	47. nuclear	48. snaw-naw-as	
	48. officer*	49. snuneymuxw	
	49. passage	50. stz'uminus	
	50. patrol*	51. tadoule	
	51. peace	52. territor*	
	52. peacekeeping	53. tlingit	
	53. plane*	54. uashat-malietenam	
	54. port*	55. uqaqtittiji	
	55. presence	56. wela'lin	
	56. protect*	57. wet'suwet'en	
	57. putin	58. wiiliideh	
	58. radar*		
	59. ranger*		
	60. remilitarization		
	61. rescue		
	62. reserve		
	63. resolute		
	64. russia*		
	65. safe		
	66. safety		
	67. satellite*		
	68. secure		
	69. security		
	70. ship		
	71. shipbuilding		
	72. ships		
	73. shore*		
	74. soldier*		
	75. stability		
	76. strateg*		
	77. submarine*		
	78. surveillance		
	79. tactic*		
	80. target*		
	81. threat*		
	82. torpedo*		
	83. troop*		
	84. ukraine		
	85. vessels		
	86. war		
	87. warfare		
	88. warhead		
	89. warheads		
	90. warning		
	91. wars		
	92. warship*		

* Denotes where light lemmatization was proposed.

APPENDIX B

GUIDELINES AND CODEBOOK

To access the commented R code and the dataset used in this paper's analysis, please visit the following GitHub page: <https://github.com/AlexandreMillette1989/CanadianHansardArcticNPF>

Guidelines used:

- All the selected interventions MPs made occurred during the House of Commons debates and had the discussed topic tag: Canadian Arctic sovereignty.
- The unmodified unit of analysis was the interventions of each MP as a bag-of-words. These were modified slightly before the study began (see below).

We tokenized the text of each intervention and applied the following modifications:

- We transformed all characters to lower case.
- We removed all punctuation.
- We removed all symbols.
- We removed all numbers.
- We removed the English stop words integrated in the *quanteda* package (see Benoit et al., 2018).

Based on these modifications, we calculated the number of words for each intervention.

Our dictionary (see Appendix A) was created based on literature knowledge and a manual reading of a randomized sample of MPs' interventions (30% of our total). Overall, we identified over 200 words that were divided into four themes. Some light lemmatization was proposed (see words with an *).

A document-feature matrix was then used on the modified tokenized version of the texts to look up words from

our dictionary in each intervention. Whenever a word from our dictionary was mentioned, we added one occurrence to that theme within an intervention. Therefore, if no word from our dictionary was mentioned in a theme, the final result was zero. This gave us the number of words from our dictionary for each theme per intervention.

Because each intervention's length was different, we ratioed our results, for comparison, using the following formula:

$$\frac{\text{number of words per theme}}{\text{total number of words}} \times 100$$

Once we obtained our results through text analysis, we ran a randomized manual verification (30% of our total). This helped us gain context for the analysis.

Only one person validated the results in this paper as it was done through natural language processing/automated text analysis. However, future research might use multiple coders and validate reliability using Cohen's kappa or a similar method, especially if they are using manual coding.

Dataset Variables

- Variable 1: legislature information
- Variable 2: session information
- Variable 3: MP name
- Variable 4: caucus (MP political party)
- Variable 5: intervention (narrative / MP speech)
- Variable 6: nword (number of words per intervention)
- Variable 7: environment and climate ratio
- Variable 8: military and security ratio
- Variable 9: Indigenous Peoples ratio
- Variable 10: economy and resources ratio