

Digital Policy Hub – Working Paper

The Military's Crisis of Analytics: Modernizing Misconduct Data

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Key Points

- Systemic sexual violence in the Canadian Armed Forces (CAF) is rooted in a deeply entrenched and continuously reinforced organizational culture of gendered power structures, hypersexualization and extreme pressures for conformity. Despite several reform attempts, meaningful culture change has remained largely unrealized, partially due to a lack of accountability mechanisms for leaders responsible for change.
- Despite a decade of formal data collection on sexual misconduct, the CAF today cannot accurately determine its prevalence and associated trends or the effectiveness of prevention initiatives.
- While several external authorities have problematized the data deficiencies evident in sexual misconduct reporting, monitoring and tracking, the CAF has not reckoned with identified issues in data fragmentation, data not fit for purpose and non-compliance in data governance. The newly announced hateful conduct database is intended to address these issues but is poised to replicate existing gaps.
- This crisis of analytics impedes effective organizational responses, tailored policy solutions and accountability measures, perpetuating a cycle of reform failure. Without reliable data, policy design and monitoring lacks key inputs, metrics and quantifiable targets, and activity continues to be construed for impact.
- A number of progressive organizational data strategies collectively articulate the CAF's commitments to modernization, the employment of technologies such as artificial intelligence (AI) and blockchain, and an analytics-driven institutionalized governance model. However, these strategies appear limited to the domains of intelligence and operational data, despite their organization-wide jurisdiction and potential for addressing sexual misconduct data issues, thereby reflecting a historic pattern of resistance to culture change under the guise of preoccupations with national security.

The Crisis of Analytics

The CAF's data strategy states that "becoming a data-driven organization requires significant culture change" (Department of National Defence [DND] 2019, 20). This working paper explores how the inverse is equally true: that culture change efforts against systemic sexual misconduct require becoming a data-driven organization. Widespread *sexual misconduct* — the official institutional term for sexual violence — has been evident since the CAF's early days of gender integration; this long-standing problem is rooted in a harmful institutional culture predicated on gendered power structures, an idealized toxic masculinity, and norms of obedience and subordination. The CAF began internal data collection on sexual misconduct in 2015, despite the media reporting pervasive rates since the 1990s; unfortunately, these efforts continue to "defy basic principles of data collection" (MacKenzie 2023, 44).

The CAF has been subjected to a number of reform attempts since the 1990s, each facing substantial organizational resistance and ultimately failing to address systemic sexual violence (Fish 2021). These failed attempts at reform are partially due to a lack of concrete organizational analytics able to inform tailored policy solutions and establish specific monitoring and evaluation targets that would keep the leaders charged with

change management accountable. The result has been a vicious “policy graveyard” cycle of media scandals, independent external reviews, reports and recommendations, and reform failure (Wong 2025). The first working paper in this two-part study documented the evolution of data realities in the CAF to detail persistent issues in data availability, data fragmentation, data not fit for purpose, and accountability (ibid.). This second working paper explores both governance and technological solutions to this crisis of analytics in order to guide recommendations on interventions for more reliable analytics, which would bring crucial and currently absent elements of accountability, continuity, transparency and knowledge production to the culture change effort. While data transformation is not the end goal of reform, it is a crucial means toward enabling the broader objective of meaningful culture change.

Several CAF data and analytics strategies collectively articulate a commitment to data-driven decision making, improving data interoperability and sharing, as well as continuously curating existing and new data holdings. The organization-wide analytics strategy outlines the suite of tools necessary for knowledge production, monitoring and evaluation, including descriptive, diagnostic, predictive and prescriptive analytics, and confirms the CAF’s efforts to capture these (DND 2022). Despite this, the CAF cannot currently determine the prevalence of organizational sexual misconduct and its associated trends, or the extent to which initiatives have made intended impacts (Therrien 2024). Lacking the bigger picture severely impedes responses to address systemic sexual violence, as past and present progress indicators remain anecdotal (ibid.). The current reform moment is at a critical point, with one external monitor remarking “the organization cannot continue with the current pace of change for much longer...[we should] determine where the chances of instilling real change are the greatest and...realign resources accordingly” (ibid., 20). Given the fundamental role analytics play in change management, data must be identified as one such high-impact sphere.

The path forward is twofold: First, the CAF must create a revamped governance framework that addresses persistent noncompliance across a range of data stakeholders and, subsequently, supports greater institutional accountability for both sound data and broader cultural reform. Second, the CAF must explicitly include the conduct and culture data domain in its organizational modernization plans and consider progressive technological interventions that could aggregate the many disparate, piecemeal sexual misconduct data assets. This working paper will first explore noncompliance within existing CAF data governance frameworks before discussing the potential role emerging technology could play in producing stronger misconduct analytics. Ultimately, both governance and technology are needed to span the analytics gap and ensure institutional accountability for the reform the CAF has resisted for more than three decades.

Noncompliance in CAF Data Governance Frameworks

Data governance refers to the various practices surrounding how organizational data is used, managed, interpreted and designed and its quality assured (Ferré 2022). Robust governance in this context is especially important, given the CAF’s unique “total”

design and exemption from the external oversight that other federal bodies are typically subject to (Goffman 1961). The data deficiencies in sexual misconduct reporting, tracking and monitoring systems, and how these have contributed to reform failure, have been noted by several external reviewers and monitors, including Marie Deschamps (2015), Morris J. Fish (2021), Louise Arbour (2022) and Jocelyne Therrien (2024). None of the organization's data and analytics frameworks specifically mention sexual misconduct data nor have these policies translated into actual data practices within this data domain, despite their function as overarching, organization-wide frameworks.

The DND and CAF Data Strategy

The cornerstone of the DND/CAF data strategy (DND 2019) identifies the challenges of data silos, data sharing reluctance, and inflexible, highly customized legacy systems, and outlines a plan for “becoming a data-driven organization” — one of many mandated reform recommendations (DND 2024, 23). Here, a *data-driven organization* is defined as one where personnel are accountable for their data roles, data justifies decision making, data is integrated, access restrictions are minimized, and governance is institutionalized. The CAF announced this recommendation as scheduled for complete implementation by December 2024 (ibid., 18).

In reality, whether the DND/CAF has achieved this goal remains to be seen. Military leadership has frequently made claims on the full implementation of culture change recommendations when no qualifying data exists (Burke 2021). In such announcements, activity is construed as impact, and a lack of data permits this conflation. Containment, rather than data, is the dominant driver of decision making in the sexual misconduct realm, despite the strategy's commitments otherwise.

The CAF's central Sexual Misconduct Incident Tracking System (SMITS) has not publicly released its annual report since 2019, and has remained siloed from other data systems despite several external reviewers and DND-commissioned consultants describing how this impedes organizational analytics required for policy design, monitoring and evaluation, as well as institutional accountability. While the various data and analytics strategies acknowledge the importance of up-to-date data for analytics, this has not translated into SMITS' standard operating procedures. Aggressive access restrictions and data-sharing reluctance endure throughout holdings, greatly reducing the utility of existing data.

Additionally, data continues to be fragmented. A 2025 CAF data catalogue listed 28 organizational sexual misconduct data holdings; the access requirements for the majority are case-by-case, and key information on data steward contacts, misconduct variables, data locations and formats is absent.¹ There is also no individual or team identified as being responsible for the considerable integration and aggregation tasks to which the data strategy has committed. While several external reviews have articulated the need to better leverage existing data assets

¹ “Draft DND/CAF Misconduct Data Catalog,” Excel sheet, February 13, 2025 (provided to the author through access to information request A-2024-01704).

as well as curate additional holdings, there is no evidence that efforts have been made in this realm. For the many military leaders involved in culture change tasks, including those in data collection and progress monitoring, there is no line of accountability should they fail to implement the promised efforts, or should those efforts fail to produce their intended results (Duval-Lantoin 2023).

The DND and CAF Data Governance Framework

The DND/CAF data governance framework (DND 2022) outlines the layers of roles involved between the points of data collection and data consumption. The framework presents an adaptive governance model and provides an exhaustive list of stakeholders and their responsibilities (ibid.). However, SMITS managers describe a lack of clarity on their roles, resulting in almost half of the cases missing key information, as well as cases not being updated and a broader lack of quality assurance² (Arbour 2022). This creates substantial analytics gaps, as trends cannot be identified from case trajectories despite almost a decade of data collection.

Truthfully, governance issues persist across non-conduct data domains (ibid.). However, organizational loyalty to these strategies and frameworks appears to exist exclusively with operational and intelligence data domains. While operational and intelligence data is referenced throughout the framework, conduct and culture is mentioned only once in a data-domain catalogue (DND 2022). This resembles historic strategies the CAF has pursued to minimize the sexual misconduct problem, where the symbolic weight of national defence and narratives around sacrifice, burdens and soldierhood are leveraged to diminish the relative urgency of systemic sexual violence (Eichler 2017). Rhetoric both within and outside the military reinforces the cognitive divide between matters of national security and operational effectiveness and matters of institutional sexual violence and gender discrimination. This “functional imperative” is one foundational cause for the cyclical nature of reform failure over the past three decades, and current data strategy and governance efforts must be sensitive to this hard-learned lesson (Wadham et al. 2018). Conduct and culture data, just like intelligence data, is a critical analytics asset that implicates organizational credibility, force strength and operational effectiveness, and data governance frameworks must explicitly consider this domain in their protocols.

2 “2024 Sexual Misconduct Incident Tracker System Report,” unreleased annual report (provided to the author through access to information request A-2024-02024).

Emerging Technology for Analytics

All organizational strategies and frameworks discussed note the potential for emerging technology such as AI and blockchain to support more effective analytics. These documents stress the importance of modernization and governance efforts to enable the integration of these technologies, given the value of automated processing and rapidly deployable analytics for operational requirements. However, the most recent culture change progress update reports that the organization has decided on “an incremental approach” to conduct and culture data deficiencies (Therrien 2024, 8). This approach involves the launch of an additional database that will initially capture hateful conduct before later incorporating sexual misconduct cases. This database currently operates on a password-protected Excel spreadsheet.³ Unfortunately, this indicates that sexual misconduct reporting, tracking and monitoring are not slotted to benefit from the technological interventions announced for other data domains. Further, this approach resembles past data initiatives, including SMITS, which was intended to be an adaptive system capable of capturing additional data points as managers deemed necessary. It is also unclear how or if integration efforts will be pursued, meaning that this will likely result in another database that will not address the lack of horizontal coordination across the excess of existing CAF data holdings, nor solve the persistent problems in data entry, consistent variables, auditing and continuity pervasive in these systems.

This is a missed opportunity, as the identified limitations of data not fit for purpose, fragmentation, incomplete entries and a lack of accountability could be directly supported by technological interventions. While privacy and sensitive data considerations must be made when integrating AI and other automation-enabling technologies into the conduct and culture data domain, this is no different for the intelligence and operational domains for which the CAF has announced modernization efforts. For example, AI and blockchain have been slotted for application in weapons and drones testing — data assets that are both ranked at a higher security level than any of the organizational sexual misconduct data holdings.⁴

Automation

The advantage of detailed, real-time data for analytics is well-established across policy areas. The CAF has almost exclusively relied on survey and administrative data for knowledge production, but this data often lacks crucial detail on particular groups of interest, such as perpetrators, and systematically lags reality by weeks, months or even years (Goldfarb 2025). Data lag is costly, as the impact of culture change initiatives — or lack thereof — remains unclear while service members continue to experience widespread sexual violence at work. Few, if any, sexual misconduct

3 “Draft DND/CAF Misconduct Data Catalog,” Excel sheet, February 13, 2025 (provided to the author through access to information request A-2024-01704).

4 “Draft DND/CAF Misconduct Data Catalog,” Excel sheet, February 13, 2025 (provided to the author through access to information request A-2024-01704).

databases in the CAF have been designed with automated reporting capabilities, even if aggregate analytics is slated as one of the system's principal functions.⁵

The governance framework highlights AI and other data-driven technologies poised to support organizational analytics, but it appears that these tools have not been interpreted as relevant to the conduct and culture data domain. While opinion on machine-learning tools' ability to "understand" context remains divided in professional and academic fields, many tools are now advanced enough to extract and categorize non-standardized data into structured information and insights (*ibid.*, 5). The great variance in variables, definitions, annual timelines and other data elements in the 28 databases tracking sexual misconduct could be potentially standardized through machine-learning tools, which have also proven effective in anonymizing sensitive data for aggregate analytics (*ibid.*).

Integration

Fragmentation and interoperability present as some of the most consequential and daunting challenges in the crisis of analytics. The executive director of the Sexual Misconduct Support and Response Centre (SMSRC) argued that the vast demands for data collection make it unlikely that a single information management system could capture all the desired information.⁶ Centralization has been a long-stated goal of the CAF, yet little progress has been made since formal sexual misconduct data collection began in 2015. However, a variety of technological interventions exist that support interoperability without requiring the significant restructuring that centralization involves.

For example, data-fabric architecture allows the integration of data from multiple sources into a unified platform that standardizes formats, protocols and variables in real time. This architecture can automate workflows to reduce manual data entry, regularly auditing data and building in accountability mechanisms for those identified as responsible for specific holdings (Ramos 2022). In this sense, data governance could be cemented through such a system that is programmed with the various stakeholders' responsibilities and automatic alerts for when they are not met. The data duplicates, homogenous misconduct definitions, and data gaps evident across the vast conduct and culture domain could be partially addressed within this system, as it facilitates machine-learning technologies that are able to identify probable duplicates, and organize varied data types and variables for organization-wide insights (*ibid.*). Fabric architecture can also be designed to strictly operate within a specific privacy and security framework, and its ability to handle sensitive data has been proven with wide application across the health sector (Berman 2023). Significantly, this technology is able to produce cross-database insights while respecting original ownership in legacy systems, reducing the burden of personnel buy-in and the reality of institutional exhaustion with data systems overturn. Like many data-driven technologies, fabric architecture is only growing in accessibility; Microsoft, which already hosts a number of CAF data holdings, released its Fabric analytics platform in 2023.

5 "Directive for the Institutionalization of OPHTAS [Operation Honour Tracking and Analysis System]," internal briefing note, September 16, 2019 (provided to the author through access to information request A-2024-01150).

6 "Recommendations to Enhance Understanding and Reporting of Sexual Misconduct in the CAF," unreleased SMSRC paper, January 6, 2020 (provided to the author through access to information request A-2024-01150).

Blockchain, mentioned in a number of the CAF's data and analytics strategies, presents as another potential technological avenue to confront the crisis of analytics. SMITS currently operates as a tiered system where specific individuals have access to a set parameter of cases within the system and hold sole responsibility for entry of all data points involved in a given case.⁷ However, many SMITS data points rely on information outside the direct jurisdiction of those individuals. Blockchain can facilitate selective disclosure access to various stakeholders involved in different stages and aspects of a report, while maintaining a secure ledger of changes and entries to ensure accountability (Crawford 2023).

Evidently, the utility of emerging technologies such as AI, data-fabric architecture and blockchain extend to this data domain. While this working paper does not endeavour to prescribe a single technological intervention in the CAF's crisis of analytics, it does make clear the possible solutions available for the persistent issues of accountability, fragmentation and data not fit for purpose in sexual misconduct data.⁸ However, the CAF continues to approach its data and analytics strategies with a selective interpretation that is exclusively preoccupied with operational and intelligence domains, raising the question of why sexual misconduct data has not benefited from a proportionate degree of attention and resource allocation. Conduct and culture data must be incorporated into the CAF's wider modernization strategies, and internal decision making on data-domain prioritization and resourcing must be scrutinized for historic organizational biases against the sexual misconduct problem and culture change. Despite countless official statements and commitments from military leaders on reform, the conduct and culture data domain appears to be deemed unworthy for the modernization and technological interventions slotted for other domains.

Recommendations

The CAF will need to pursue both data governance and technological interventions in order to realize the reform that has been demanded of it. The present incremental approach to improve sexual misconduct analytics needs to be realigned with organization-wide data strategies, as part of a broader reconceptualization of addressing systemic sexual violence as a principal organizational mandate rather than as a secondary pursuit. Systemic sexual misconduct harms organizational credibility, force strength and operational effectiveness, demonstrating that this, too, is a matter of national security. The following recommendations are needed to enact this reform.

- **A formal conduct and culture data execution plan that aligns with the CAF's data and analytics strategies:** In line with various external reviews stressing the negative spillovers of data deficiencies in culture change efforts, the CAF should produce a formal conduct and culture-specific data plan as part of its reform mandate. This should be aligned with the organization's three principal data and analytics strategies. Specifically, information required for descriptive, diagnostic, predictive and prescriptive analytics should be consolidated with a concrete plan, and a timeline for securing necessary data

⁷ "ADM(IM) Update on Central Complain/Incident Reporting System," internal briefing note, November 18, 2021 (provided to the author through access to information request A-2024-01105).

⁸ "Directive for the Institutionalization of OPHTAS," internal briefing note, September 16, 2019 (provided to the author through access to information request A-2024-01150).

points, including their location and how to access them, will be ensured for all relevant parties.

- **An official recommendation from the external monitor to refocus organizational culture change efforts and resources on the crisis of analytics:** Given the external monitor's recent statements that all evidence of culture change progress remains anecdotal due to data deficiencies, the monitor should formally recommend to Parliament and DND that improving data systems should remain one of the final, foremost priorities as organizational momentum for culture change begins to scale down.
- **A dedicated data integration team:** A team whose primary responsibilities are focused on data integration and interoperability efforts should be established, rather than this remaining an additional consideration within the vast purview of the DND assistant deputy ministers. This team could work independently, or in partnership with the various other CAF data management and data governance working groups. However, measures must be in place to guarantee that the conduct and culture data domain is allotted sufficient resourcing and consideration within these groups who have historically prioritized operational and intelligence data.

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