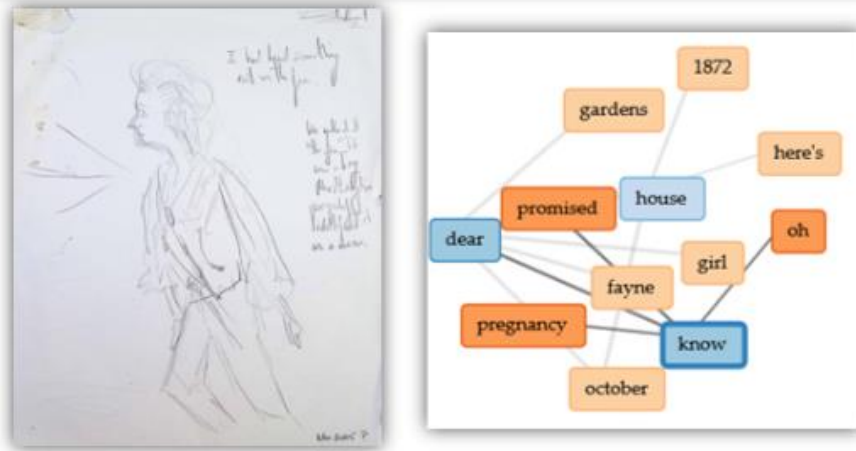


Reading Women's Friendships in Ann-Marie MacDonald's *Fayne*: The interplay of human- and machine-level data processing



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In Part Six of **Ann-Marie MacDonald's 2022 novel, *Fayne***, teen-aged protagonist Charlotte Bell – overwhelmed with the realization that they were born with intersex traits and have been lied to for years by family members – decides to make the trek, on foot, alone, from Edinburgh to the family's estate, which is located on the border of Scotland and England. Charlotte – or as our research group refers to them, given their increasingly non-binary subjectivity, Charlie – calls themselves a “migratory bird,” guided home by the “memory” of their mother who sank into a bog, not to mention a spirit version of the family's cow (MacDonald, 590-96). In a novel full of descriptions of travel and attempts to possess a home, Charlie's otherworldly walk is perhaps the most conspicuous example of an **affective mapping**. Scholars in the field of human geography distinguish maps themselves from the **operation of mapping**, which is “the spatial practices enacted to solve relational problems” (Kitchin & Dodge, 335). Such problems might include navigating from one location to another or tracking all the movements described in a literary text, and practices might be cognitive and tool-oriented, while also being sited in the contingent and relational needs and desires of the body.

In her chapter on “Affective Mapping” in the *Encyclopedia of Human Geography*, **Clancy Willmott** provides an overview, not only of approaches to the “more-than-representational mapping of affect and sensation,” but to “the emotional, felt, bodily and haunting aspects of mapping practice” (Willmott, 53). Notable in Willmott's overview – and especially relevant to a novel like *Fayne*, and our work with it - is that affective mapping emerges out of a feminist materialist approach to consider multiple “ways of knowing,” often highlighting the philosophical, social, and political “governance of

emotions, bodies and space” (53-54). Also significant for our discussion today is Willmott’s closing note that - despite the centrality of the body in affect theory - **“it is generally accepted that the hybridity between humans and machines are entirely capable of affective exchange . . . [and that] maps are constantly brought into being through the combination of the cartographic and the bodily” (60).**

The work presented today is associated with the “Mapping Ann-Marie MacDonald” (MAMM) project, homed at Brock University

MAMM: Mapping Ann-Marie MacDonald

SSHRC  **CRSH**
Social Sciences and Humanities Research Council
Conseil de recherches en sciences humaines



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As we noted last year, the first year of MAMM was taken up by developing a data collection model with several prerequisites:

1. That the parameters for collecting and assessing textual evidence be clearly defined.
2. That data collection could proceed asynchronously and yet collaboratively.
3. That the data collected be usable -
4. - and adaptable.

5. That certain core principles of data feminism – namely, “elevate emotion and embodiment” and “make labor visible” (D’Ignazio & Klein 2020, 18) - be foregrounded in the design and use of data collection tools.

For the first phase of activity, MAMM collected data on locations, routes, sense of place, and relationality associated with two characters – Henry Froelich and Oskar Fried - featured in MacDonald’s 2003 novel *The Way the Crow Flies*, and, along the way, developed **a methodology and some low-skill tools to facilitate a consensus-based close reading**. These included:

- A pairing of drop-down menus in an Excel Workbook with a [detailed Glossary](#), which affirmed the goal of a focused, integrated close reading among team members;
- A Logbook, which provides a transparent archive of the embodied labour of RAs and a space for them to articulate the context and effects of methodological choices.

In 2024-2025, our data collection projects have focused, first, on two of MacDonald’s dramatic works – *The Arab’s Mouth* and *Belle Moral: A Natural History* – and second, on *Fayne*, for which we collected information on the spatial qualities of women’s friendships. In today’s presentation, we will discuss our work with data from *The Way the Crow Flies* and *Fayne*, as we consider **the interplay of human-level and machine-level processing in relation to cognitive and affective mapping**.

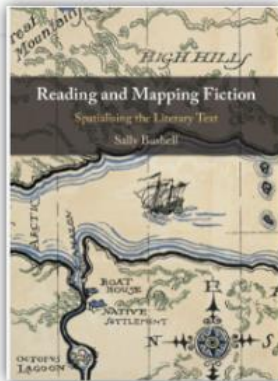
We will start by going over some of our conceptual framing, in particular our use of Sally Bushell’s work on cognitive mapping and our continued interest in data and affect, influenced by Willmott, as well as D’Ignazio and Klein. Next, we will describe our lab work and some of our findings.

I want to note that this bit of exploration was inspired by a question from Susan Brown during a presentation about MAMM for folks at University of Guelph’s Cultural and Technology Studies program. In looking at our lines of data, Susan queried the use of page numbers as anchor points, rightly noting that page numbers are barely interesting as quantitative, let alone qualitative information, especially when each line of data includes a quotation from the literary text. In the moment, I was able to speak to the use of page numbers for creating visualizations showing the structuring of spatial and literary features; however, the question: **“why not use the quotation as an anchor point?”** led to this fascinating methodological side quest.

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Cognitive Mapping

Cognitive Mapping



- Wolfgang Iser's **Reader-Response Theory**:
 - "shifting perspectives"
 - a negotiation of "theme" and "horizon"
 - "wandering viewpoints"
- **Anchor-points** in navigation: like landmarks but more subjectively known.

The phrase "anchor point" allows us to bring in **Sally Bushell's work, *Reading and Mapping Fiction: Spatialising the Literary Text* (2020)**, especially her chapter on "Reading as Mapping, or, What Cannot be Visualised." There, she works through various cognitive mapping theories, including the spatial language of reader-response theory, medieval memory models, and neuropsychological research on navigation techniques. For the lab work we are reporting on, two ideas are relevant:

- First: Wolfgang Iser's description of reading as a matter of:
 - "shifting perspectives" (in the text and of the reader);
 - a negotiation of "theme" and "horizon" (as the reader makes sense via the reading process of what they are learning and what they can expect as a narrative progresses); and
 - "wandering viewpoints" (which is how Iser describes the complex work of readerly synthesis).
- Second: The neuropsychological concept of "**anchor-points**". As Bushell explains, researchers have explored the brain's capacity for different types of navigation (from random, to working with a map, to depending on cues or landmarks). An "anchor-point" is like a landmark – allowing one to orient oneself relationally – but is more subjectively known (the difference between "George Brown College" and "the corner where I lost my wallet in 2006," or "the bog into which my mother sank"). Importantly, in literature, though anchor-points are textual, they may be mapped differently by individual readers; that is, by the "shifting perspective" and "wandering viewpoints" Iser describes, which may be further linked to the idea of an affective readerly practice in cognitive mapping.

Bushell's chapter is subtitled "What Cannot be Visualised"; however, the MAMM group turned to the text-reading and analysis tool *Voyant*, precisely for some of its visualization capacities and affective affordances.

As a text-mining tool, *Voyant* requires minimal training, which has been a key prerequisite for MAMM's interdisciplinary, usable, and adaptable approach to doing work.

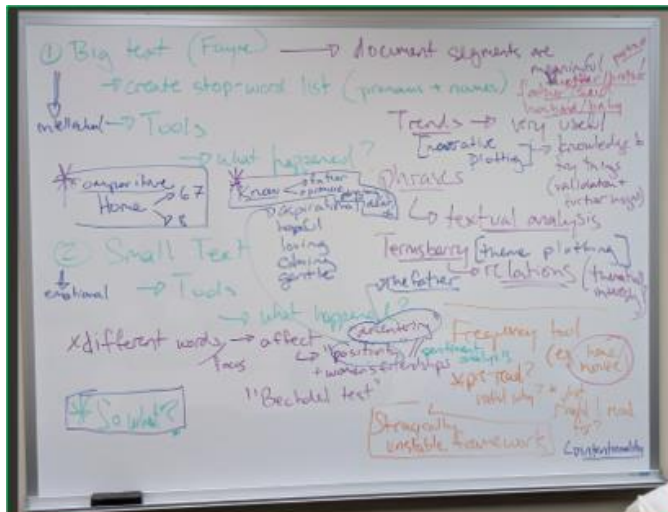
Because our data collection process includes the recording of literary quotations, we decided to explore this set of quotations as a "**small text**," especially in comparison to the "**big text**," which is how we referred to an entire novel. The idea was to challenge what we noted to be a typical order of operations (as gleaned from watching "How to Use *Voyant*" tutorials), in which a big text was uploaded for machine-level processing, after which the first results were processed by a human – for example, to get rid of "noise" - so that a useful text mining and analysis might proceed.

Here, we are both methodologically but also conceptually interested in the idea of "processing," especially as it intersects with "validation." An outcome of our data collection ontology has been rethinking what might constitute the validation of results, whereby the guiding question is "**is this process internally valid to our methodology as we've defined it,**" or "**is this useful, especially for a literary analysis?**" We posit that even the typical order of operations for using *Voyant* involves validation during a first stage of human-level processing, as the search for and capacity to deal with "noise" presupposes assumptions and aspirations for qualitative text-mining. In strategically manipulating the interplay of machine-level and human-level data processing, we elevate our exploration of matters of "assumption" or "aspiration"; that is, of data and the "affective exchange". In *Data Feminism*, D'Ignazio and Klein challenge the principle that the visualization of data can be – or should be – neutral, asking "how might activating emotion – leveraging, rather than resisting, emotion in data visualization – help us learn, remember, and communicate with data"? (77).

In setting up our use of *Voyant*, one goal was to **leverage the affective potential of comparing the machine-level processing the big text versus the small text** (that is, the authorial unit of analysis versus a unit of analysis that has undergone a great deal of pointed human-level processing). In going over some of our analytical results, we will comment on the dominant aspect of our affective exchange, which was a complex, layered, **recognition**; both a **witnessing** and **an affirmation of readerly investment and subjectivity**.

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Case Study – Big Texts versus Small Texts



For our first investigation, we made use of *The Way the Crow Flies* as our big text, and – as our small text – the quotations gathered as part of our Froelich & Fried data collection project. The focus for this first investigation was to gain familiarity with *Voyant*, choose a few visualization tools that seemed useful, and develop principles for creating a stopword list.

With respect to the corpus and visualization tools, we gravitated towards those that showed word **frequency**, **trends**, **correlations** or **colocations**, and **sentiment analysis**.

After looking at the first results from *Voyant* based on the big text, we decided to create a stopword list including all the character names and pronouns. A key element of our data collection for both *The Way the Crow Flies* and *Fayne* is **a focus on bodies in space and focalization** – in other words, we had already done the work of using characters as readerly anchor points and wanted our exploration of *Voyant* to teach us something new.

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To begin our work with *Fayne*, we developed our stopword list to copy and paste into *Voyant* when desired. We then uploaded to *Voyant* the big text and the small text – of about 250,000 and 10,000 words, respectively – into separate tabs to make some comparisons. Our small text represents only 4% of the authorial text, which shows the significant degree of consensus-based, human-level processing that went into developing this unit of analysis.

Context on the parameters of developing our *Fayne* small text: **our focus was exploring spatialization in the novel's representation of women's friendships**, with data collected on three friendship pairings:

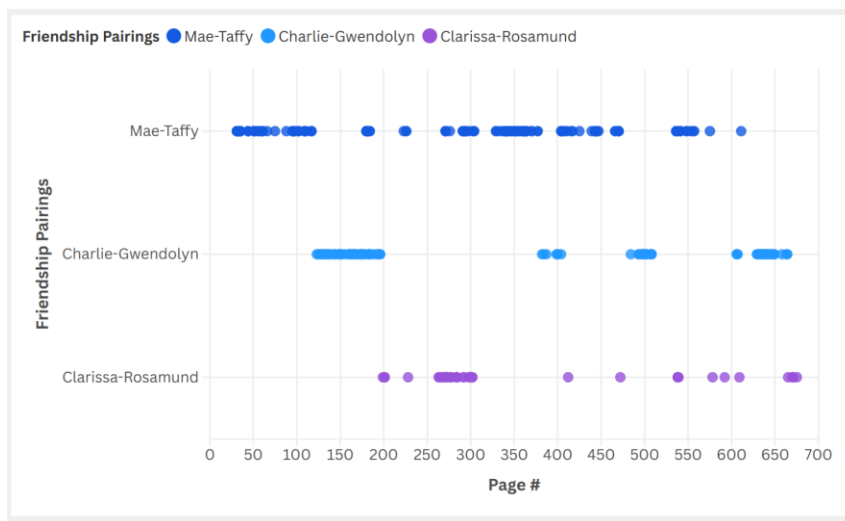


Research on late-19th century women's fashions, from AMM's personal archive.

Women's Friendships Being Investigated:

- **Mae and Taffy:** Communicate primarily through transatlantic letters, narrating life events to each other.
- **Charlie and Gwendolyn:** First meet at Fayne house to introduce Charlie to female society.
- **Clarissa and Rosamund:** Mostly estranged but resume a civil relationship upon the marriage of Henry to Mae.

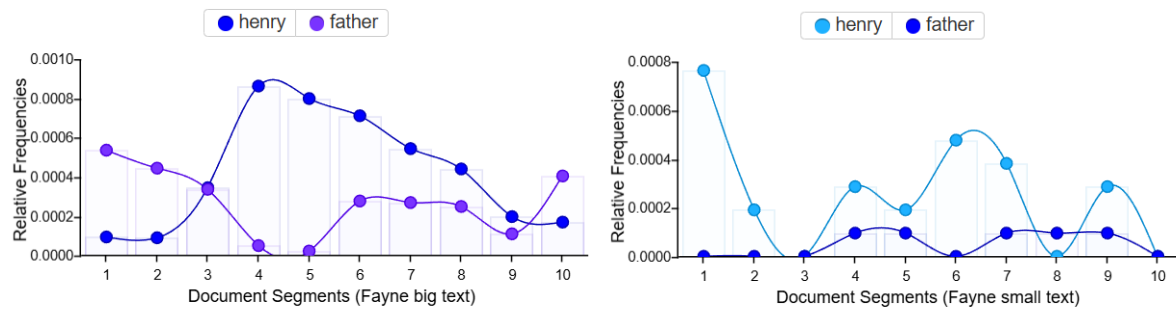
Regarding trends in a big text/small text comparison: Voyant divides every text into 10 segments, which may be helpful for the same reason that page numbers are in showing the plotting of a narrative. For our *Fayne* small text, the divisions are not as straightforwardly correlated to an authorial unit of analysis (as we collected data according to the parameters of this project); that said, this visualization – produced using Flourish tools - shows the consistent focus in the novel on women's friendships.



Nodes of Analysis

Node 1: De-centering the father.

In this first example, we look at a trend comparison of the terms “Henry” and “Father” in the big text versus the small text:



This comparison was made prior to uploading the stopwords list of names and pronouns.

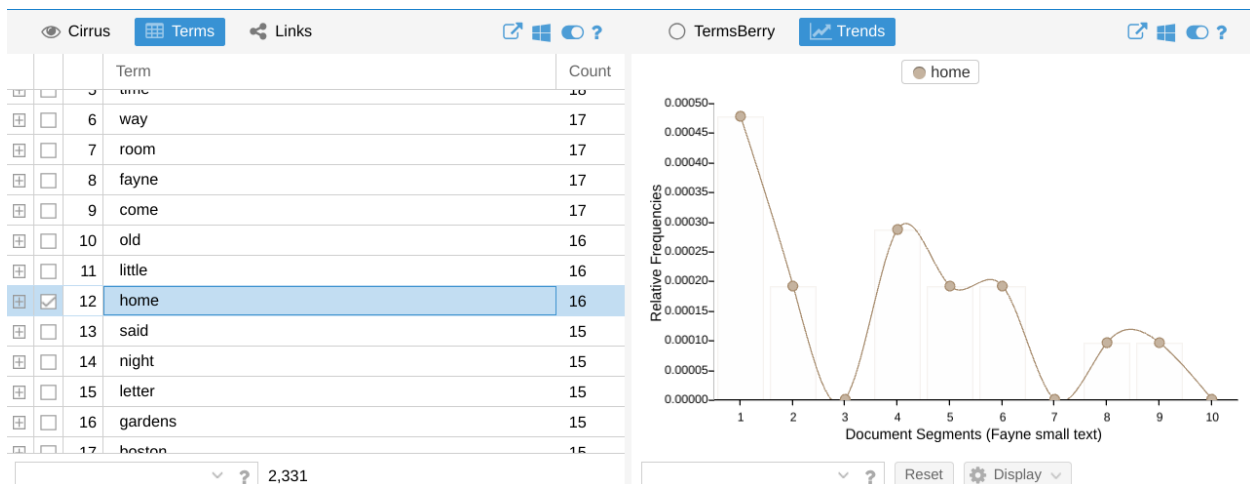
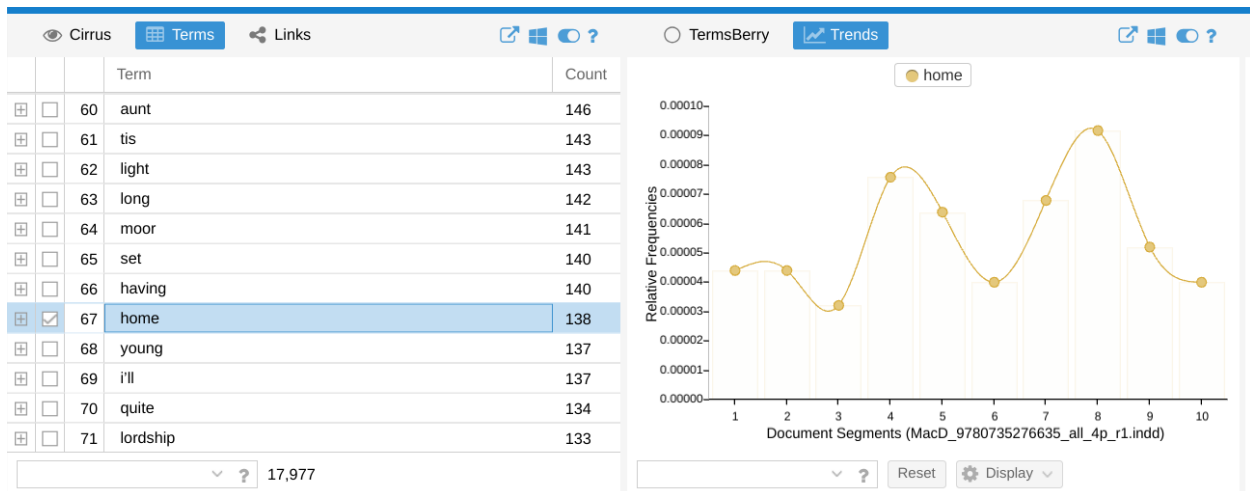
In the big text, Henry’s activities as a husband and as a father diverge before coming together at the end of the narrative, while – in the small text – the correlations are somewhat less even, thus indicating **a more complicated understanding of his role within women’s friendships.**

Also: after uploading the stopwords list and comparing the frequency of certain words, one team member noted that – in the big text – the top word was “Father,” while in the small text, the first word linked to a male family member - “brother” - was 31st on the list (or tied for 13th with repeat numbers; “father” dropped to 135th on the list in the small text, with only 5 instances).

Cirrus Terms Links				Cirrus Terms Links			
		Term	Count			Term	Count
☒	1	father	672	☐	26	school	11
☐	2	like	552	☐	27	paris	10
☐	3	said	487	☐	28	drawing	10
☐	4	time	400	☐	29	course	10
☐	5	know	397	☐	30	came	10
☐	6	says	366	☒	31	brother	10
☐	7	old	342	☐	32	1872	10
☐	8	eyes	342	☐	33	window	9
☐	9	hand	330	☐	34	just	9
☐	10	say	314	☐	35	having	9
☐	11	i'm	305	☐	36	got	9
☐	12	oh	299	☐	37	died	9

Node 2: Spaces of Women’s Friendship

Looking again at frequency, a team member noticed that – in the big text – the term “home” is the 67th most frequently used term, while – in the small text – it is 12th (or tied for 55th versus 7th considering repeat rankings). This shift indicates **a more pointed concern or acknowledgement that “home” is a significant type of space for women’s friendships.**



Another team member, using the TermsBerry tool, honed in on two named locations - “Fayne” (the ancestral estate) and “Boston” (where Mae hails from) - noting that whereas the term “house” is closely correlated with “Fayne”, for “Boston,” the more correlated term is “home,” providing **insight into Mae’s persistent sense of displacement, notwithstanding her often cheerful-seeming letters to Taffy.**

The figure displays two network graphs. The left graph is a dense network with nodes like 'like', 'know', 'father', 'said', 'mother', 'voice', 'said', 'turned', 'aunt', 'bird', 'oh', 'mother', 'voice', 'said', 'turned', 'aunt', 'bird', 'oh', 'mother', 'voice'. The right graph is a sparser network with nodes like '1872', 'gardens', 'here's', 'oh', 'girl', 'fayne', 'pregnancy', 'dear', 'promised', 'house', 'know', 'october'.

		Term	Count			Term	Count
☐	☐	1 like	552	☐	☐	1 like	20
☐	☐	2 good	250	☐	☐	2 led	7
☐	☐	3 right	170	☐	☐	3 sweet	6
☐	☐	4 great	158	☐	☐	4 good	6
☐	☐	5 love	128	☐	☐	5 darling	6
☐	☐	6 darling	123	☐	☐	6 wonderful	5
☐	☐	7 thank	113	☐	☐	7 right	5
^@positive 840				^@positive 140			

		Term	Count			Term	Count
☐	☐	1 dead	105	☐	☐	1 died	9
☐	☐	2 pain	87	☐	☐	2 poor	7
☐	☐	3 sorry	76	☐	☐	3 afraid	5
☐	☐	4 poor	76	☐	☐	4 fallen	4
☐	☐	5 death	73	☐	☐	5 worried	3
☐	☐	6 fell	72	☐	☐	6 terrible	3
☐	☐	7 cry	64	☐	☐	7 sickly	3
^@negative 1,592				^@negative 190			

While there is a good deal of overlap of positive words between the two texts, the quality of negative words in the small text is distinct: there are more adjectives, **suggesting a focus on the description of subjective experience and a context of intimate trust.**

Affective Exchange and Conclusions

Going into our lab work with *Voyant*, our working hypothesis was **that a comparison of the machine-level processing of the authorial text versus a small text, produced via MAMM's data collection methodology, would produce meaningful analytical results and usefully disrupt the typical order of operations for machine- and human-level processing in a text-mining.** In validating that hypothesis, however, our most important discovery was the extent to which **exploring *Voyant's* processing of the small text produced an affective response, characterized by a sense of intimate recognition and investment.**

Or perhaps the better word is "care" - quite synchronistically, in extant theorizing of affective exchange in the digital space, an important area of current research involves the nature of friendship, especially as defined against changing phenomenologies of time, space, and intimacy. However, whereas friendship studies tend to consider the digital space as one of mediation, an increasingly pressing concern is the multi-

subjectival exchange among humans and machines, and how that exchange might also be defined by an ethics of care.

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Works Cited:

Bushell, S. (2020). *Reading and mapping fiction : spatialising the literary text*. Cambridge University Press.

D'Ignazio, C., & Klein, L. F. (2020). *Data feminism*. The MIT Press.

Kitchin, R., & Dodge, M. (2007). "Rethinking maps." *Progress in Human Geography*, 31(3), 331-344. <https://doi.org/10.1177/0309132507077082>

MacDonald, A.-M. (2022). *Fayne*. Alfred A. Knopf Canada.

- (2004). *The Way the Crow Flies*. Vintage Canada.

Sinclair, Stéfán and Geoffrey Rockwell. *Voyant Tools*. Web. May 8-9, 2025, <http://voyant-tools.org/>.

Wilmott, C. (2020). "Affective Mapping." *International Encyclopedia of Human Geography* (Second Edition), Editor(s): Audrey Kobayashi, Elsevier, 53-60. <https://doi.org/10.1016/B978-0-08-102295-5.10508-6>.