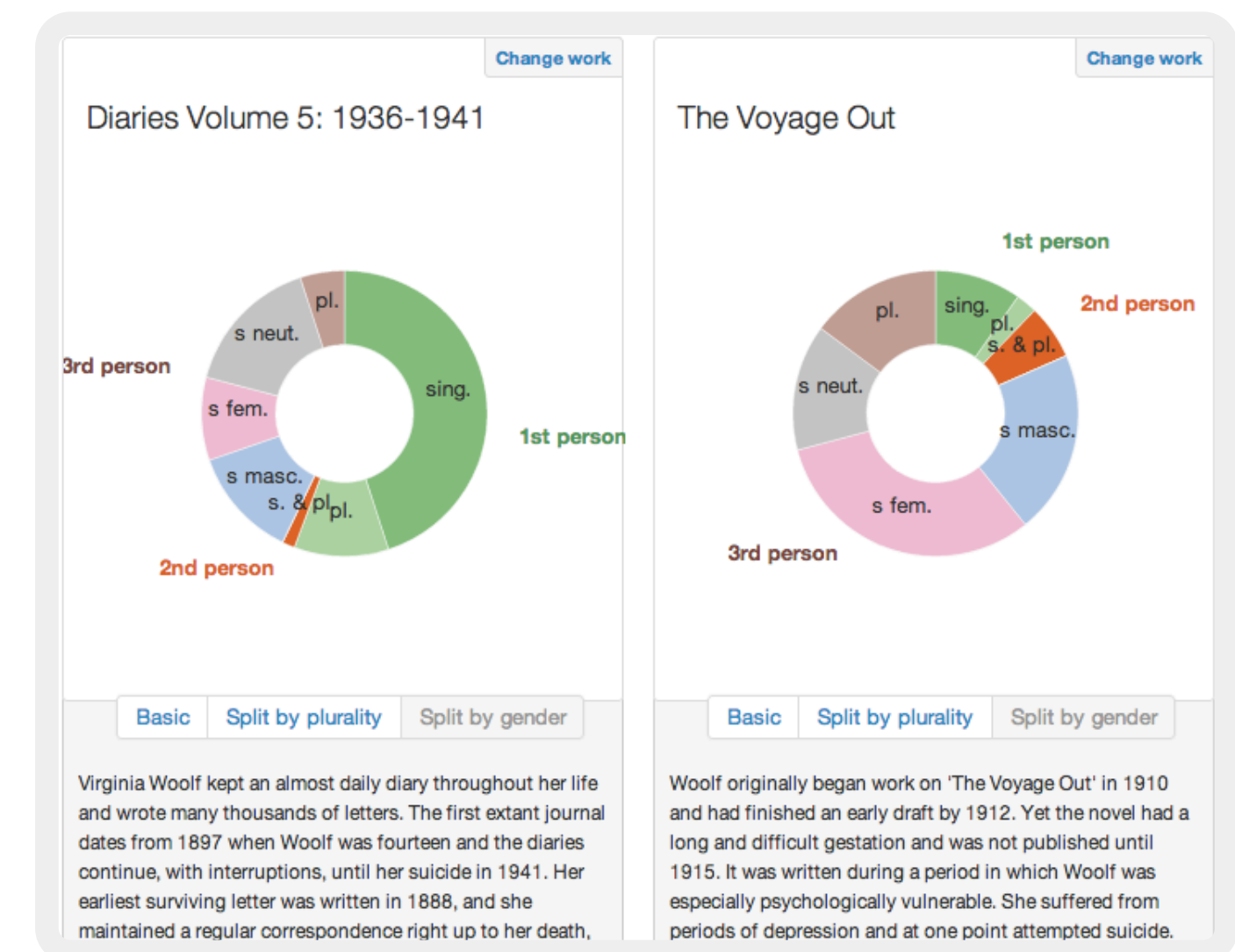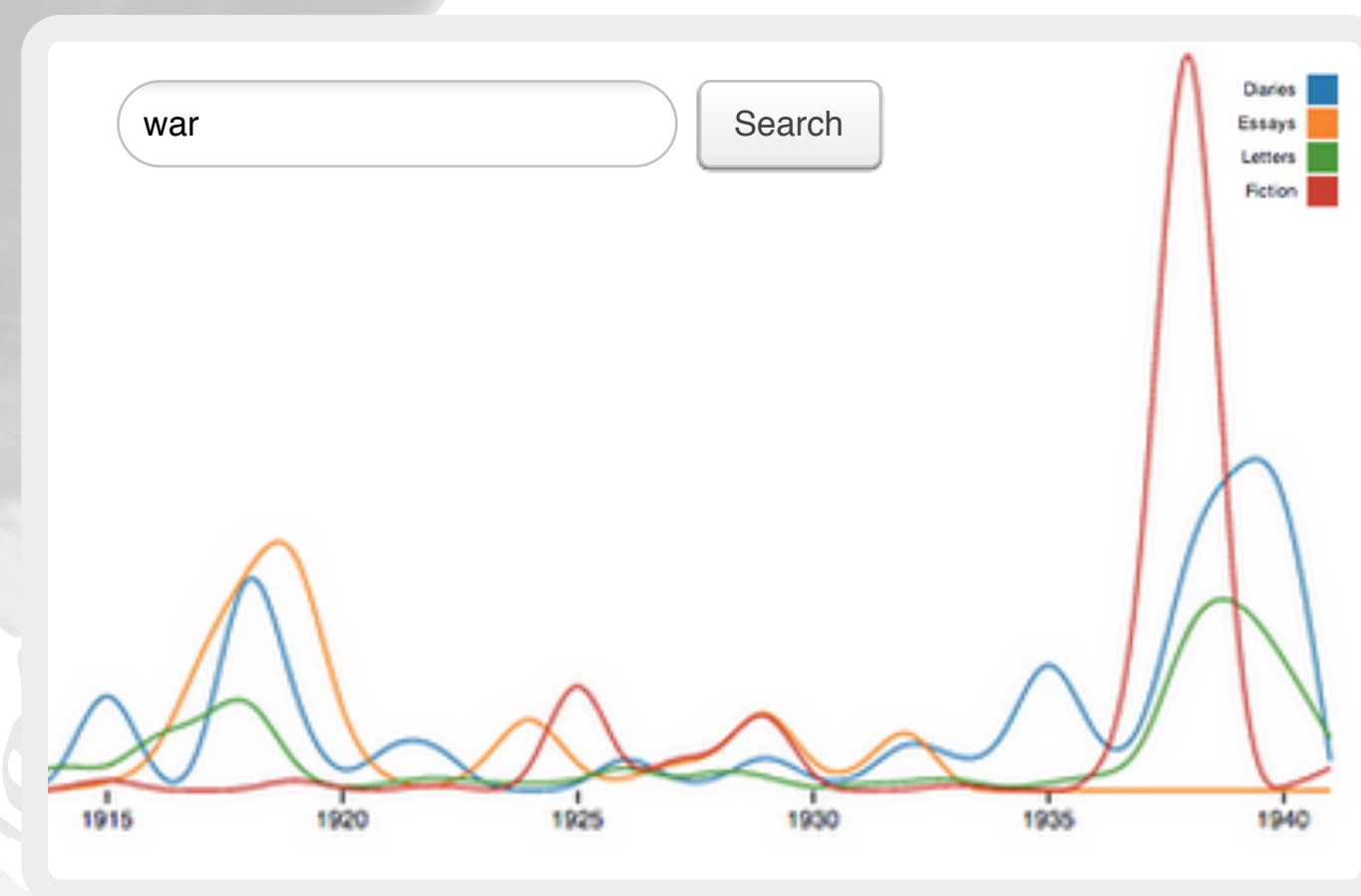# Woolf Works

An interactive visualization of Virginia Woolf's writing

Overview

Every secret of a writer's soul, every experience of his life, every quality of his mind is written large in his works

—Virginia Woolf, *Orlando*

The Problem

The humanities are taking a 'computational turn'. But its success relies on an interdisciplinary approach, harnessing both the insight that the humanists bring to the table and the tools the scientists can provide. There a few places where anxiety for the digital steam roller is greater than in the old guard of Woolf Scholarship. Virginia Woolf is considered one of the greatest feminist and modernist writers of the twentieth century. Yet, it took a long time for Woolf to become canonized, we must not leave her behind this time around. It is an exciting challenge to imagine what the new field can do for Woolf, and perhaps even, what she could do for the new field.

Motivation

While trawling through Virginia Woolf's diaries, Alice Staveley (a Stanford English professor) wondered if there was a way we could quantitively analyze changes in Woolf's writing over time. She begun compiling an electronic corpus of nearly all Woolf's published fiction, non-fiction, essays, diaries and letters. Working with Prof. Staveley and team of digital humanists in the Stanford English department, we embarked on a text visualization journey to offer a window into Woolf's life and work through this corpus. Our project is modest in scope but as Alice hopes, recasting Woolf in the digital age may inspire more to do the same and perhaps even present a fulcrum for rethinking modernist and feminist criticism.

Design

Approach

We hoped to create a tool that might be useful for scholars, but the most sincere goal of our work was to incite excitement for Woolf in the average reader. If we can convince someone to pick up *Mrs. Dalloway* or *To the Lighthouse* after playing with our project then we would consider it a success. In short, the aim of our work is to bring someone back to the text itself with new motivations.
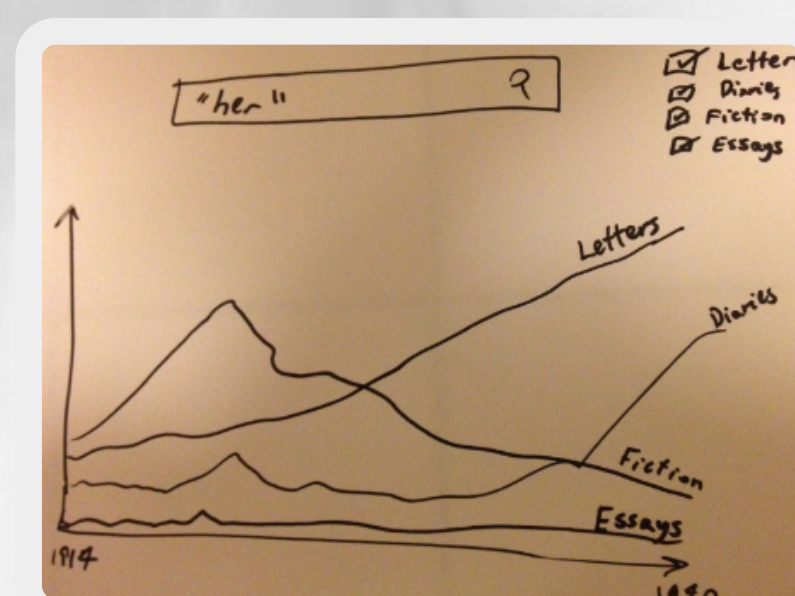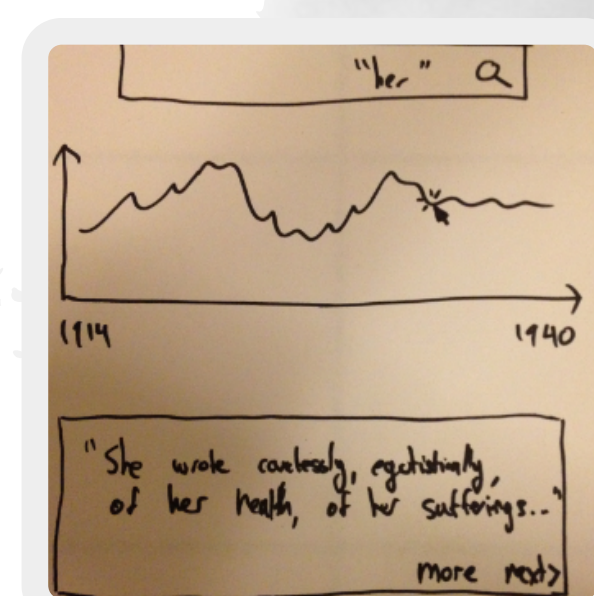
Search

Any window we cut into Woolf's writings must open her work and life to exploration. With this, we realized that an essential feature of successfully visualizing the corpus would lie in interactivity. The user should be free to bring their own ideas and goals to their exploration. We were inspired in this regard by both Name Voyager and the Google NGram Viewer. This set in motion the focal interaction for our visualization: taking in a search query and returning a graph of how that word(s) is used over time or place in Woolf's work. The tactic of user initiated dynamic querying allowed us to place the data investigation firmly in the hands of the user.

Pronouns

Pronoun usage in a text can reveal a number of insights - who the narrator might be, or the target audience perhaps. The breadth of genre in the the corpus allowed us to explore interesting differences in pronoun use, such as those between Woolf's diaries and her essays, for example. Furthermore, her feminist polemics provided rich grounds for gender pronoun analysis. In the spirit of bringing context to a data visualization, our pronoun pie charts can be compared and contrasted across texts and each comes with a summary of the novel or work so that the newcomer to Woolf might better understand or question the results they see.

Diction

Producing word clouds is a dangerous business. As one of our advisors in the English department warned, "give humanists words and they will make meaning from them". However, Prof. Staveley, was very keen on seeing what they would produce and once she saw them, delighted in drawing insights from the results. To keep them around, we made a number careful design choices like excluding very common words and favoring bi-gram clouds that showed the relative frequency for pairs of words across a text. This far from vindicated our clouds but it allowed them to become a wonderful tool for encouraging exploration. For instance, many of the main characters of novels or the themes of an essay surfaced in the clouds. We found this to be a great platform to inspire queries in our search tool.

Future Work

The more we considered our backend data mining choices, the more we realized imperfections in certain necessary compromises. For example, how to tell the difference between 'you' singular and 'you' plural, or how to represent the genetic evolution of a work of fiction over time. Next steps would certainly involve a detailed sweep of all the behind the scenes design choices to ensure the visualizations are not misleadingly skewed.

Finally, through the course of this quarter, Prof. Staveley has linked up with other Woolf scholars to begin a project that would bring the Hogarth Press (Virginia and Leonard Woolf's publishing house) online. Our work is merely an introduction to the tools that could be harnessed to realize this project. But we hope it might prove to be useful moving forward or that we can lend a hand if needed.

Andrew Suciu and Xanthe Travlos