To write about Ireland is to write about land. Whether the focus is the history of colonialism, decolonization, and postcolonialism or the romanticization of the Irish landscape that has fed the tourism industry and the mythologizing of Irish culture, Ireland is a place defined by its location and its complicated past. With the Good Friday Agreement as a relatively recent historical development, Ireland’s partition, itself a comparatively recent historical development, continues to loom as a defining facet of Irish identity.

Ireland has been studied widely within the context of postcolonial theory, which has raised the questions of whether Ireland is truly a “post”colonial entity and what it means to be Irish, namely for those who identify as Irish but reside in the arbitrarily partitioned Northern Ireland. Within Northern Ireland, Belfast as an urban and social space has long been a fascinating case. Given that specific streets, or portions of particular streets, have been unofficially designated as Catholic or Protestant, Belfast is a city that lends itself to critical attention to the implications of space.

With a critical eye towards the implications of Irish space, James Joyce famously mapped Dublin in his epic *Ulysses*, and it has been a focus of literary scholars and digital-humanities scholars who are interested in the ways in which Joyce portrays the space and how it is understood through his references to streets and landmarks. Notable projects have extracted toponyms and mapped them in GIS or rendered them in the context of a video game based on the epic. In considering how “distance reading,” to use the term coined by Franco Moretti, and digital humanities have deepened our understanding of Joyce, we became interested in how maps might offer a new way of seeing how borders and boundaries shape the works of Irish women writers, especially in the context of how women in their works are contained or constrained by physical boundaries. As such, we hypothesized that mapping selected works of Irish women writers would reveal visually that women’s movements within and across borders appear to be different from the movements of men in the same spaces.

Two Belfast writers whose works consider the implications of space and how it is traversed are Anne Devlin, whose plays and short stories are primarily set in Andersonstown, a Catholic-majority section of Belfast, and Lucy Caldwell, whose novels, short stories, and plays are primarily set in Belfast, and often in Protestant-majority East Belfast. As in Joyce’s *Ulysses*, Devlin’s plays refer so frequently to specific street names that they assume familiarity with the city’s neighborhoods and the implications of those spaces. As such, our research examines Devlin’s use of Belfast toponography and landmarks to depict characters as being more or less limited in their mobility by the political mapping and regulation of Belfast space. Caldwell, on the other hand, does not set her works exclusively in Belfast as Devlin does; in fact, they depict more international travel and therefore incorporate an element of transnationalism that is less prevalent in Devlin’s works. Furthermore, while Devlin’s works are set primarily in the 1980s, Caldwell’s works are set in the more recent 2000s and 2010s. Despite these differences, we were interested in using GIS to examine these authors more closely.

With open-source GIS software QGIS, we mapped the toponyms noted in the works and the character movements from location to location. We posited those mappings against a background map that had been shaded according to Northern Ireland census data of religious demographic information, to try to visually capture the political codification so prevalent in the works. We gathered the data from the 1981 and 2011 censuses, and then mapped the Devlin and Caldwell works on separate maps, according to the time frame in which the works were set. We were hoping to posit the works against demographic data relevant to the works.
To work with the texts, we needed to create digital copies of the texts. We created digital copies by scanning paper copies of the works and then using optical character recognition software, specifically Tesseract, to create .txt files from the scans. We then converted the .txt files to .xml files by manually tagging them to capture character and location data, using an RNC schema of our own conception. We pulled external geodata for the known locations from OpenStreetMaps; we used reasonable estimations of approximate locations based on landmark information in the works to come up with approximate areas for unknown locations, and the geodata for those areas was also pulled from OpenStreetMaps. When the .xml files were finished, we used XQUERY commands to extract that location and character data from the texts into .csv table files.

To later create the animations, we created an arbitrary and standard timeframe and inserted that time information into the CSV files for each work, using the movement of time and the major divisions of each work as benchmarks. With this, each work can be displayed on the map as having occurred at the same time, but the movements of characters occur at slightly different rates, based on how quickly events occurred in each work.

The CSV files were then uploaded into our QGIS database and superimposed upon background map shadings. Then, after installing the QGIS plugin TimeMapper, we used the arbitrary timeframe we devised to animate the works.

From the process, we found that women demonstrated more mobility in these works than we had originally thought. Some of this came from the realization that women were more likely to engage in certain types of mobility than men were. For example, in the Devlin play *Ourselves Alone*, women were more likely to have been described as moving prior to the play’s action, as in the case of Emer’s relocating to Belfast from Toomebridge to Belfast. Men, on the other hand, are more likely to move unaccompanied during the time frame of the play. When women move in the time frame of the play, they are almost always accompanied by male characters. This is a characteristic shared by the characters in the other Devlin plays.

In the Caldwell works, a greater range of mobility is shared by all of the characters in general. They are much more likely to travel outside of Northern Ireland and Ireland, to England or even to more distant locations, such as Bahrain. The female characters are also usually accompanied by male characters in their movements. In *The Meeting Point*, for example, female characters are almost always accompanied by male characters, with the exception of the movements of two female characters, Noor and Anna, near the end of the novel. Similarly, of all of the movements the female protagonist of *Where They Were Missed* makes, more than half of them are made with male characters. Female characters do have mobility. However, they move mostly in the company of men.

This process provided interesting insights into the works of Devlin and Caldwell, and we are excited to have the opportunity to share our process and results. We invite you to view the project website, a work in progress, at fiona.matthewcarter.org and the project GitHub repository at https://github.com/frabbitry/Green_Scholar_Project and provide feedback. Thank you.