

LITERARY GEOGRAPHIES

Bringing Literature and Literary Geographies into Geospatial Research Teams

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Introduction

Within literary geography, interdisciplinarity and collaboration have generally been developed in the intersections among multiple cultural and humanistic approaches, drawing on cultural geography, spatial theory, literary and cultural studies, and tourism studies, for instance (Hones 2015; McLaughlin 2019; Thurgill and Lovell 2019). A series of four collaborative Thinking Space pieces in *Literary Geographies* 5(1) followed a conference on literary geography and collaboration. Here, we would like to look further to geography's own 'intradisciplinarity' (Domosh 2017) as an opportunity for broadening the impact of literary geographies within the wide tent of geography. Accordingly, in this short Thinking Space Paper we ask: What

role might literary geography play when practiced in parallel with the geospatial science wings of the geographic discipline? To explore this question, we will describe how we have engaged with poetry, fiction, nonfiction, and film in the first stage of a mapping and modeling project in the U.S. Southwest. Ultimately, we propose that incorporating literary geographic approaches within geospatial research teams can help deepen, texture, and humanize the place-based and particular contexts of said research projects.

We are a geohumanities scholar and practitioner (Magrane), a geographic information scientist (Buenemann), and a graduate student in applied geography (Aguirre) working on a U.S. Natural Resources Conservation Service (NRCS)-funded project that has as its ultimate goal the development of a geospatial methodological approach for mapping and modeling inactive acequias in New Mexico, U.S. Acequias represent an important element of the state's and region's cultural and agricultural legacy and future. By leveraging New Mexico's new 1 m spatial resolution Light Detection And Ranging (LiDAR) data set (i.e., a remotely sensed digital elevation dataset from which detailed information may be obtained regarding the topography of earth's bare surface as well as landscape features such as houses and trees) and other cutting-edge geospatial data and tools, the project aims to help develop a streamlined approach to identifying valuable inactive acequias worthy of study, preservation, and protection. During regular research team meetings, we read and discuss scholarly literature on acequias; in addition, we have incorporated readings, viewings, and discussion of media and literary texts including poetry, nonfiction, film, and literary studies, into our meetings. For example, we viewed the 1988 film *The Milagro Beanfield War*, directed by Robert Redford and based on the novel by John Nichols ([1974] 2000), perhaps the most widely known of representations of acequia culture in film. Related to this, the project team read ecocriticism and literary criticism that examined the film and novel through the lens of contested narratives of land use and environmental justice (Lynch 2008; Finnie 2013). In addition, we have explored how particular texts represent and (re)produce acequia culture and its narratives and practices of resilience, resistance, and mutual aid. While not originally part of the research project's conception, we added these literary encounters due to our recognition of the role that story, song, and narrative play in acequia culture. For instance, we were struck by the sharing of poetry and song at the 2019 annual Congreso de las Acequias, a gathering organized by the New Mexico Acequia Association that we attended early in our project. The inclusion of the literary encounters were also introduced because of Magrane's scholarly interests; he joined the research team after the original conception and funding of the project.

Brief Background on Acequias

Acequias are gravity-fed water irrigation systems common in areas of northern New Mexico and southern Colorado for the last four centuries. Water from higher elevation streams and snowmelt is diverted and channeled in an acequia madre (mother ditch), with lateral ditches running off of the main ditch used to irrigate fields. Introduced to the area during the time that Spanish colonization in the region marched up the Camino Real de Tierra Adentro—which some, such as Juan Estevan Arellano (2014: 27), call the Camino de Agua (Water Road),

the acequia system has been traced back through Spain in the 700s and before that to the Arabian Peninsula, perhaps to Yemen. Arellano suspects that the term has its roots in the word ‘saquiya,’ referring to the ‘cupbearer of water or wine’ (28).

Acequias are deeply intertwined with cultural practices and with *querencia* (roughly translated as love of and/or sense of place, through practice). Scholarly as well as community-engaged work has often used the phrase ‘acequia culture’ (e.g. Rivera 1998) to describe and represent how acequias are much more than water ditches. They are often understood and approached as commons and as examples of mutual aid (Perramond 2013; Henkel 2014; Rivera 2020). In short, they are deeply intertwined with cultural practices and social reproduction in the region. Acequia culture faces multiple threats, including loss of water rights, urban encroachment, younger community members leaving acequia communities for other opportunities, as well as the effects of climate change on water availability and growing seasons (Fernald et al. 2012; Cox 2014). On the other hand, some (Fernald et al. 2012; Cox 2014; Rivera 2020) have also argued that acequia communities serve as a model of adaptation and that they are likely more sustainable than large-scale industrial agriculture in the region, and that their long history as a community system based in mutual aid makes them particularly resilient.

Benedición del Agua and Juan the Bear and the Water of Life: La Acequia de Juan del Oso

Two literary texts that we have read in our research group are a poem-film, *Benedición del Agua*, by poet Olivia Romo and filmmakers Daniel Sonis and Levi Romero (n.d.) and *Juan the Bear and the Water of Life: La Acequia de Juan del Oso*, a children’s book by Enrique Lamadrid and Juan Estevan Arellano (2008). By engaging with these texts, and others, we have gained a more textured understanding of acequia culture.

Benedición del Agua is a poem of place, a poem of activism and connection. The poem and the film version of it weave reflections of water, family, heritage, and tradition, both through the language of the poem and through the short film’s settings, which include a kitchen table where the poet speaks the poem to her grandmother, a scene in front of a river, and scenes of acequias and farming. The poem sways back and forth between expressions of reverence and respect for family, heritage, and tradition and expressions of resistance. The language of the poem is also specific to this region of northern New Mexico—for example, one of us, Aguirre, grew up in the region, and has pointed out that, as in the poem-film, it’s common to call children *hija* or *hita*/*hijo* or *hito* in northern New Mexico, where this poem takes place, while in southern New Mexico (where we are based) it is more common to say *mijo*/*mija*.

In Enrique R. Lamadrid and Juan Estevan Arellano’s (2008) children’s book *Juan the Bear and the Water of Life / La Acequia de Juan del Oso*, a young woman, Silvia, meets a bear, who had been admiring her singing to a flock of sheep at the edge of the forest. They begin a friendship that grows to a point where she moves into his cave. When Silvia returns to her father and the village, she gives birth to a son, Juan del Oso, named for his grandpa Juan and

his father, Oso Grande (Big Bear). As Juan grows, it becomes clear that he is different from other boys. He inadvertently almost kills a boy who has teased him, and after that runs into the mountains. In the mountains, he meets two other boys, also named Juan, also outcasts with superhuman strengths, and he meets his father, Oso Grande. Ultimately, the three youths use their strength to build acequias and divert the water from the river high in the mountains for the community below. They are then able to end their exile in the mountains and re-join the community.

This story illustrates a number of themes, including a group of outcasts doing important collaborative deeds, and connections between humans and non-humans. It also demonstrates the importance of legend, myth, and narrative in the persistence of acequia communities. While this book was published in 2008, Lamadrid and Arellano note that versions of this story have been told for much longer.

Texts such as *Benedición del Agua* and *Juan the Bear and the Water of Life* play an important role in the (re)production of acequia culture. We approach these texts as more-than-representational: the poems and stories can be considered actors that contribute to the ongoing resilience of acequia communities and culture. Within our research group, our reading of these texts as more-than-representational has also been influenced by the concept of the extra-textual within literary geography (e.g. Hones 2008; Thurgill and Lovell 2019), where ‘actual-world places shift from shaping the reading of the text to being shaped *by* the reading of the text’ (Thurgill and Lovell 2019: 18). Our group’s reading and experience of these texts has helped to shape our understandings of acequia communities, influencing the way that we perceive their embodied places. As the project continues to develop, we anticipate that aspects of our literary geographical research and encounters will be incorporated into project reports, scholarly papers, and general public-facing media, such as digital story maps.

Literary Geographies and Geospatial Research: Two Modest proposals

Our experience incorporating acequia literature in our research team leads us to the following two modest proposals:

- Before embarking on cross-cultural fieldwork, geographers (individuals or teams) might incorporate the reading of literature, film, and other media from the regions or sites of their research, as well as any literary geography that analyzes and contextualizes such works. We suspect that many geographers may already do this; however, doing so in an intentional manner could help geographers further understand and in turn ethically engage with the social and cultural intricacies of their fieldwork sites and communities.
- Literary geographers could be written into geospatial research proposals as collaborators who would lead on critical and cultural interpretation of the research’s geospatial phenomena, data, and products. In development of proposals, this might also have particular resonance in relation to ethics statements or broader impact statements.

There are, of course, risks in such an approach. Focusing on particular literary texts will not necessarily present an ‘authentic’ picture of an area. The texts might be limited in scope, or they might (re)produce problematic narratives or perspectives. However, this is where a literary geographic approach that also takes a critical and *contextual* lens to texts and their intertextualities, their (re)presentations, and their circulation, can help to ameliorate such risks. Such collaborations might also explore and consider how geospatial perspectives and remote sensing data and representations might iteratively inform sense of and representation of place, as well as interpretation of literary texts, perhaps akin to work in digital literary geography and deep mapping approaches that bring together close and distant reading (e.g. Taylor et al. 2018) or post-representational literary cartographies that ‘explore the ways in which literary texts both encapsulate emergent cartographies and work as sources for the epistemological interrogation of maps’ (Rossetto 2014: 526).

In our case, by engaging with various literary texts in a geospatial research team, we have deepened our understanding of acequia communities, particularly in a time when we could not do fieldwork because of COVID-19. Hopefully it gives us a better feel for thinking carefully about how the work produced will be used, how it might be of benefit for particular communities. We suggest that this might be an example of how literary and media geographies can deepen and add texture to geospatial research teams and projects. What if, for instance, following the above two modest proposals, geospatial research projects regularly included time to read and view and discuss cultural productions from the communities in the areas being researched? Would this help the geography discipline as a whole to continue on a path toward doing research that is less extractive and more ethical and empathetic? We suspect it might.

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