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Mediating Memory: Mass Grave Recovery and Digital Culture in the Iberian Peninsula

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Mediating Memory: Mass Grave Recovery and Digital Culture in the Iberian Peninsula

Wendy Perla Kurtz

The large corpus of digital and social media on the Internet pertaining to the recuperation of historical memory demonstrates how present-day Spaniards continue to grapple with events stemming from the dictatorship of Francisco Franco. In an ever-connected world, there is, not surprisingly, a wave of digital media inundating the Spanish public that focuses on the recovery of victims from mass graves in the Iberian Peninsula. Digital media and its various modes of dissemination encourage the constant updating of information and provides producers of digital materials and users of social networking sites the means to constantly renew conversations about the recuperation efforts. By cyclically publishing digital texts online that show the rituals and commemorations pertaining to the ongoing reburials, contemporary Spaniards keep physical sites of memory alive by broadcasting the repeated rituals of exhumation and inhumation as the identification of remains continue. Participation in social media networks generate local and regional online communities centered around memorial rites. This essay studies the types of media being produced regarding the recuperation of mass graves (photographs, videos, social media data), how that media is disseminated to contemporary audiences through social networking sites (*Facebook*, *Twitter*, *YouTube* and *Flickr*), and analyzes the performative rituals of searching and reburial, as represented in digital texts. Digital productions allow families and communities of survivors—both physical and virtual communities— to highlight the process of locating the disappeared.[1] The consideration of different genres and modes of representation surface a pattern of ritualistic practices that advances from the search for the missing, to the exhumation process, leading to the reburials and culminating in yearly commemorations honoring victims. The array of multimedia elements containing rituals of reburial and commemoration disseminated through the web give a polyphonic voice to community efforts.

Thick mapping makes it possible to create multiple layers of culturally, socially, and historically relevant materials, as Todd Presner explains:

> On its most basic level, 'thick mapping' refers to the process of collecting, aggregating, and visualizing ever more layers of geographic or place-specific data. Thick maps are sometimes called 'deep maps' because they embody

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[1] A virtual community is a network of individuals who interact through computer-mediated means, without the need for proximity. For the purposes of this essay, virtual communities are created and maintained through social media sites.

temporal and historical dynamics through a multiplicity of layered narratives, sources, and even representational practices. [2]

Using Geographic Information Systems (GIS)—or digital mapping platforms—thick maps layer a variety of multimedia elements onto a digital cartographic interface. This essay will also analyze the role of digital maps in assisting in the recuperation of historical memory regarding the exhumation of mass graves. The analysis includes a discussion on thick mapping and its role within the humanities and digital humanities. The discussion will then turn to describe the thick map that I have constructed called "Virtual Cartographies".[3] The map combines a dataset from the Spanish Ministry of Justice (SMJ) with a rich collection of multimedia texts directly related to specific gravesites. By mapping these layers in tandem, "Virtual Cartographies" becomes a thick map that takes the data pertaining to specific mass graves and links it directly to media associated with the sites. I will address the theoretical questions, implications and decision-making process that went into the creation of the map and corresponding website, such as: how to display multimedia content, how to present resources in a non-linear manner, and how to resolve issues of spatial ambiguity for these texts. Using the mass grave dataset published by the Ministry of Justice ("SMJ"), "Virtual Cartographies" contributes a visualization to mapping projects undertaken by the Spanish government, autonomous communities, and historical memory associations. Combining digital media with burial sites of specific locations recorded through mapping programs makes "Virtual Cartographies" a unique effort in its display of digital cultural materials in an interactive, hypermedia environment.

As of 17 December 2015, the SMJ identified over 2,600 mass graves located throughout Spain, northern Africa and the Balearic and Canary Islands.[4] The overwhelming number of gravesites, resulting from a range of repressive campaigns carried out by the Francoist regime, left a footprint of the Civil War and postwar stamped on the Peninsula. The contemporary exhumations are in large number related to the violence against civilians behind the front lines.[5]

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[2] Todd Presner, David Shepard, and Yoh Kawano, *HyperCities: Thick Mapping in the Digital Humanities* (Cambridge: Harvard University Press, 2016), 17.

[3] Wendy Perla Kurtz, "Virtual Cartographies: Visualizing Mass Grave Recovery in Contemporary Spain," accessed August 31, 2018, http://umap.openstreetmap.fr/en/map/virtual-cartographies-visualizing-mass-grave-recov_97719#5/39.198/3.845.

[4] The Ministry of Justice publishes a biannual report on the mass grave recovery effort. As of 18 December 2015, the data identified 2,642 mass graves: http://datos.gob.es/catalogo/e00003901-fosas-o-lugares-de-enterramiento-en-el-territorio-espanol.

[5] Francisco Ferrándiz, "From Tear to Pixel: Political Correctness and Digital Emotions in the Exhumation of Civil War Mass Graves in Spain Today," in *Engaging the Emotions in Spanish Culture and History*, ed. Elena Delgado, Pura Fernández and Jo Labanyi (Nashville: Vanderbilt University Press, 2016), 243.

Francisco Ferrándiz describes the civilian deaths on both sides of the political divide in "Tear to Pixel: Political Correctness and Digital Emotions in the Exhumations of Mass Graves from the Civil War:" Regarding the execution of civilians, contemporary historiography places the numbers at around fifty-five thousand executed in the Republican zone, and as many as 150,000 in the rebel Nationalist zone during the war and in the Francoist repression of the early postwar years.[6] Paul Preston estimates an additional 20,000 executions occurred under the dictatorship, not including those who died in jails and concentration camps.[7] These numbers estimate that nearly three times the number of republicans versus nationalists were killed during the war, with another 20,000 executed by the Regime in the postwar.[8]

During and after the war, the Regime targeted Republican collaborators, removing them from their homes to transport them to concentration camps or detention centers, subjecting them to torture and deplorable conditions. Tactics—such as large-scale massacres and *paseos* ("strolls") or *sacas*—were regularly practiced and served to imprint terror on Francoist dissenters. Ferrándiz describes the horrific practice of these "strolls" as:

> a generalized terror and death technique where prisoners, drawn from jails and concentration camps, or citizens, deemed collaborators of the defeated Republican government, and therefore included in execution lists drawn up by local Franco agents, were driven in trucks at dawn and shot in isolated places, abandoned on the spot or dumped into a ditch.[9]

Family members of prisoners removed (or *sacados*) from their communities were left in wait, many times never discovering the fate of their relatives and neighbors. The names of the missing were added to the figurative list of *desaparecidos* or "disappeared" whose whereabouts might never be discovered.

Throughout a series of articles, Ferrándiz explains that the current recuperation efforts do not occur in a vacuum, but rather are the most current episode in successive waves of disinterment and reburial.[10] Postwar exhumations began directly after the War:

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[6] Ferrándiz, "From Tear to Pixel," 243.

[7] Paul Preston. *El holocausto español: Odio y exterminio en la Guerra Civil y después*, trans. Catalina Martinez Munoz and Eugenia Vazquez Nacarino (Madrid: Debate, 2011), 17.

[8] Ferrándiz, "From Tear to Pixel," 243.

[9] Francisco Ferrándiz and Alejandro Baer, "Digital Memory: The Visual Recording of Mass Grave Exhumations in Contemporary Spain," *Forum: Qualitative Social Research* 9, no. 3 (2008), Art. 35, 1.

[10] Francisco Ferrándiz, "Cries and Whispers: Exhuming and Narrating Defeat in Spain Today," *Journal of Spanish Cultural Studies* 9, no. 2 (2008): 177-192; Ferrándiz, "From Tear to Pixel," 242-261; Francisco Ferrándiz and Alejandro Baer, "Digital Memory," np.

as part of the mourning for the losses on the winning side, the reconstruction of the country, and the organization of the new dictatorial state. This happened within a pervasive official narrative of military victory anchored in the concepts of religious crusade, heroism, and martyrdom—known in Spanish political history as National Catholicism."[11]

The exhumations of the victorious Nationalists served to honor and mourn the loss of their heroes, while the bodies of the defeated remained buried in unmarked graves. Whereas the remains of the Nationalists were laid in view for honoring by the entire Spanish nation, families of the defeated did not have a site from which to mourn their losses and feared retribution from the Regime if they publicly expressed grief. The second wave of exhumations came in the late 1950s, when over 30,000 bodies were recovered and transferred to the Valley of the Fallen.[12] The most recent wave of disinterments, studied herein, focuses on recovering the remaining Republican victims.

The current swell of exhumations confronts concessions made by political parties after Franco's death to ensure a smooth transition from dictatorship to democracy in order to join a contemporary European community. The Amnesty Law of 1977—informally called the Pact of Silence by many—explicitly forbade legal prosecutions against perpetrators of human rights violations that occurred during the War and postwar periods and did not permit family members to seek out the burial sites of relatives secretly discarded in mass graves. After difficult negotiations spanning twenty years, the Law of Historical Memory was enacted by Parliament on 26 December 2007, recognizing the victims of the Civil War and the dictatorship.

Michael Richards describes the effect the Pact of Silence had on social and historical forces: "[p]eople were reluctant to ask difficult questions about the recent past for fear of jeopardizing the restoration of liberal-democracy. Political and social explanation was eliminated from public debate. No particular social or political group was to carry the moral responsibility for the War or the postwar repression."[13] The Pact left a void in historical memory, particularly on the part of the defeated republicans, and the current exhumations confront the imposed silence for survivors. Joan Ramon Resina explains why the recent exhumations challenge the picture of a smooth transition: "the reemergence of the 'secret' dead annihilates at once the meticulous work of mandated amnesia. But it is not only the so-called peace of Francoism that crumbles with the return of the repressed.

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[11] Ferrándiz, "From Tear to Pixel," 243.

[12] Ferrándiz, "From Tear to Pixel," 243.

[13] Michael Richards, "Grand Narratives, Collective Memory, and Social History: Public Uses of the Past in Postwar Spain," in *Unearthing Franco's Legacy: Mass Graves and the Recovery of Historical Memory in Spain*, ed. Carlos Jerez-Farrán and Samuel Amago (Notre Dame: University of Notre Dame Press, 2010), 135.

Those frail vestiges of past violence foul a quarter of a century of cynical democracy."[14] The recuperation of bodies from hidden graves questions the transition to democracy, while at the same time filling the void in historical memory. The exhumations—government sanctioned since 2007, occurring throughout Spain and broadcast through mass media channels—enable the recuperation of a collective memory through the assemblage of testimonies and oral histories produced from the search for bodies in mass graves.

The array of multimedia elements containing rituals of reburial and commemorations disseminated through weblogs and social media networks give a polyphonic voice to recuperation efforts. Exhumation sites and commemoration rituals as recorded and distributed online help construct new historiographies by presenting alternate, collective histories about the postwar and dictatorship through the register of digital media. Virtual communities contribute to the creation of digital cultural materials by presenting alternative microhistories to combat the historiography established by the Regime. Social media sites become archives of the digital texts in the absence of a repository for the preservation and dissemination of the ever-evolving catalog of exhumations and reburials.[15] The yearly commemorations and ceremonies transferring the remains back to families and communities help generate collective knowledge and fight against the stagnation of memory. The repeated cycle of searching, exhumation, reburial, and commemoration—as represented through digital materials—helps instill a ritualistic practice surrounding the paradigmatic shift in the current wave of reburials that started circa 2000. Rather than commodifying the nostalgia of families performing the reburials, social networks include the commemoration and rituals surrounding the disinterments in a contextualized loop that repeats throughout the Peninsula as remains are continually disinterred and reinhumed.

Social media enhances the conversation revolving around rituals of remembrance because the production and dissemination of media emanates directly from the hands of descendants. Digital cultural materials made and distributed through Internet platforms show how the rituals of mourning transform mass graves into living sites of memory. Digital media added daily to the web becomes a part of the daily lives of the public. According to the Pew Research

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[14] Joan Ramon Resina, "The Weight of Memory and the Lightness of Oblivion: The Dead of the Spanish Civil War," in Jerez-Farrán and Amago, *Unearthing Franco's Legacy*, 224.

[15] The use of social media sites as archive is problematic, as the retention of those materials does not persist in perpetuity and discovery is often difficult because materials are scattered. Funding agencies, libraries, historical memory associations, and others should play a role in persisting these materials and maintaining them for future use and further study. Projects like "Virtual Cartographies" attempts to archive materials relevant to the project, but these efforts are not exhaustive, nor is the archival process a fundamental goal of the project.

Center, in 2017 59% of Spanish adults reported using social networking sites.[16] The news and digital media circulating through online sources that focus on mass grave recovery is difficult to avoid. The continual process of identifying remains and returning bodies to family members add profundity to commemorations in that new bodies are added yearly to pantheons already containing the remains of victims that emerged from the same grave site. Commemorative rituals centered on significant dates—such as the dates of execution—unite communities of survivors and invite the virtual audience to participate in the remembrance.

The digital media created and distributed through tools of technological mediation incorporate a wide variety of mediums, including: online news articles, video recordings, audio recordings, photographs, tweets, hashtags, and *Facebook* posts and shares. As the term "social media" suggests, social media platforms generate a social network of people through an online space that promotes connections, while forming the necessary audience to witness the rituals of mourning. The public and performative aspect of the recovery of human remains is a crucial component of the clear transformative intention of remembrance stressed by Joan Ramon Resina:

> Rituals of remembrance facilitate the disentangling of the living from the departed. Such rituals are at the foundation of culture and at the origin of sedentary society—in other words, of the state. To lie in state is to be placed in public view for honors accorded prior to burial. Public honoring of the deceased sustains the transcendence that the state claims with respect to each subject, lifting bereavement from the private to the social sphere.[17]

Fundamental to the recovery of memory is the official recognition of actions perpetrated during the postwar period. The public witness of the performance of the recuperation process legitimizes the loss and pain of the defeated. Until 2007, the task of recuperating the disappeared had fallen almost exclusively on family

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[16] Jacob Poushter, Caldwell Bishop, and Hanyu Chwe, "Explore global rates of internet use, smartphone ownership and social media use over time," Pew Research Center, *Social Media Use Continues to Rise in Developing Countries but Plateaus Across Developed Ones: Digital divides remain, both within and across countries*. June 19, 2018, http://www.pewglobal.org/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/. The Pew Research Center is a "nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping the world. We conduct public opinion polling, demographic research, content analysis and other data-driven social science research. We do not take policy positions." The Global World Index quarterly report on the latest trends in social networking for 2016 and report that over 95% of internet-using Spaniards between the ages of 16 and 64 have engaged with *Facebook* Services 95% "represents the number of users who have an account on *Facebook*, *Facebook* Messenger, WhatsApp or Instagram" in Spain (Global World Index. 2016).

[17] Joan Ramon Resina, "The Weight of Memory and the Lightness of Oblivion: The Dead of the Spanish Civil War," in Jerez-Farrán and Amago, *Unearthing Franco's Legacy*, 229-30.

members or local municipalities, yet it is fundamental that the process of recovery and reburial be witnessed by the entire Spanish nation, not only the family members immediately affected by the loss.

With the enactment of the Historical Memory Law in December 2007, the disinterment of graves became a public enterprise albeit with the sparse logistical and financial backing from the government, thereby gaining the necessary public to witness the efforts. Recognition by the State and Spanish public of the search for missing family members, gives survivors an opportunity to express suppressed experiences from the War and postwar period. The quest to locate the bodies of familial and affiliative relations becomes a ritual passed down through the generations. The web and its varied methods of distribution offers a unique platform for familial and affiliative relations to broadcast and share their rituals of recovery and mourning to a global audience.

Self-Representation in Digital Media

Digital technologies allow for unprecedented self-representation in the retelling of memories via the recuperation of mass graves. Ferrándiz notes the powerful feature of technology in relation to mass grave exhumations:

> as digital devices and social networking services proliferate, the new equipment and platforms are constructing new avenues for the production, circulation, and consumption of historical memory, as well as, more generally, new genres, iconographies, and styles of imaging, imagining, and recycling the past. The potentially instant accessibility of content and images in real time afforded by digital cultures also creates new forms of witnessing, new subjectivities, new political identities, and new sites for configuring multidimensional memories.[18]

Technological advances give the average person unprecedented access to record and share their experiences online. In the case of the exhumations, familial and affiliative relations transmit the processes of mourning and create virtual communities through which to recuperate collective memory. The digital media—recorded and distributed by everyday people, by communities of survivors and their descendants—ultimately contributes to the creation of culture around the rituals of recuperation and reburial.

Through personal/communal blogs and interaction on social media that document their search for and reburial of disappeared community members, contemporary Spaniards add cultural productions to the historiography produced about the Civil War and Francoism. The cultural productions generated through digital technologies, and the dissemination of those digital texts on blogs and social media, keeps a public digital record of the exhumations and the rituals surrounding them. Currently, no state-sanctioned repository exists for the

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[18] Ferrándiz, "From Tear to Pixel," 253.

retention of archival materials that center on the rituals of inhumation. Weblogs and social networks become the archive for materials on rituals of searching, remembrance, and commemoration.

Thick Mapping: Converting Space into Place

The deep layering of interactive media lends insight into the histories surrounding a topography. In the case of the exhumations, a thick map (such as "Virtual Cartographies") that combines information about the geography with digital texts about the spaces contextualizes the processes undertaken by individuals and communities around the disinterments. By inscribing gravesite locations with the testimonies, videos, narratives, newspaper articles, radio program, social network sites, etc. about the disinterments, "Virtual Cartographies" contributes a thick map that gives depth to spaces of mourning.

"Deep maps," "thick maps," "digital culture mapping," *Spatial Humanities*, *Geohumanities*, *GIS Humanities*, and "the spatial turn" are terms that, among others, have grown in popularity in academic circles during recent years. Thick mapping converts a purely geographic *space* into a *place* by imbuing the topography with memories and histories. In their Introduction to an edited book on deep mapping David J. Bodenhamer, John Corrigan and Trevor M. Harris (2015, 3) describe the characteristics of deep maps:

> A deep map is a finely detailed, multimedia depiction of a place and the people, animals, and objects that exist within in and are thus inseparable from the contours and rhythms of everyday life. Deep maps are not confined to the tangible or material, but include the discursive and ideological dimensions of place, the dreams, hopes, and fears of residents—they are, in short, positioned between matter and meaning.[19]

By combining multimedia cultural materials on a digital map, a space transforms into a place as the geography becomes inscribed with meaning. A thick map "records and represents the grain and patina of place through the juxtapositions and interpenetrations of the historical and the contemporary, the political and the poetic, the discursive and the sensual".[20] For Trevor M. Harris (2015, 29) the ultimate goal of deep maps "is to explore and attain a deeper understanding of place, as distinguishable from that of space. Place and sense of place, place-making, and experiencing place are well-established fields within geography and

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[19] David J. Bodenhamer, John Corrigan, and Trevor M. Harris, "Introduction," in *Deep Maps and Spatial Narratives*, ed. David Bodenhamer, John Corrigan, and Trevor M. Harris. (Indiana: Indiana University Press, 2015), 3.
[20] Mike Pearson and Michael Shanks, *Theatre/Archeology*, (Arlington: Routledge, 2010), 64-65.

deep mapping links these to humanistic examinations of deep contingency".[21] Rather than dots on a map that represent mass grave locations, as we will see in the SMJ's visualization (Figure 1), "Virtual Cartographies" creates a framework for analyzing the exhumations and mourning rituals while furthering the recovery of collective memory.[22]

Bodenhamer, Corrigan and Harris describe why a thick map displaying digital cultural material concerning mass grave recovery would benefit the recuperation of historical memory because in them:

> we do not find the grand narrative but rather a spatially facilitated understanding of society and culture embodied by a fragmented, provisional, and contingent argument with multiple voices and multiple stories. The deep map offers a way to integrate these multiple voices, views, and memories, allowing them to be seen and examined at various scaled (5).[23]

The juxtaposition of digital cultural materials embedded within digital "thick" map helps visualize the polyphonic voice of mass grave recuperation visible in digital texts produced by the everyday citizen, and virtual and physical communities. "Heavy in narrative, autobiography, art, folklore, stories, and memory interlaced with the physical form of space, thick maps weave a complex of multi-layered maps of both the invisible and visible aspects of place (Harris 11).[24]

Todd Presner and David Shepard (2016, 202) signal trends in thick mapping: "Mapping in the digital humanities ranges from historical mapping of 'time-layer' to memory maps, linguistic and cultural mapping, conceptual mapping, community-based mapping, and forms of counter-mapping that attempt to de-ontologize cartography and imagine new worlds".[25] As a thick cultural map,

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[21] Trevor M. Harris, "Deep Geography—Deep Mapping: Spatial Storytelling and a Sense of Place," in Bodenhamer, Corrigan, and Harris, *Deep Maps*, 29.

[22] Figure 14. Gobierno de España, "Map of Graves," *Memoria Histórica,* accessed August 31, 2018, http://www.memoriahistorica.gob.es/es-es/mapafosas/Paginas/index.aspx.

[23] Bodenhamer, Corrigan, and Harris, "Introduction," in Bodenhamer, Corrigan, and Harris, *Deep Maps*, 5.

[24] While the terms "thick mapping" and "deep mapping" are used interchangeably, the term "thick mapping" more adequately describes the newly emerging digital maps layered with multimedia elements developed after the turn of the 21st century. When employing the phrase "deep map" the consequential opposition would be to describe other types of maps as "shallow" or superficial. The dichotomy of comparing deep maps to shallow maps ascribes negative connotations to other cartographic interpretations. The phrase "thick maps," however, emotes the image of clustered materials that combine to create a dense map, without negatively attributing "thin" maps with superficiality.

[25] Todd Presner and David Shepard, "Mapping the Geospatial Turn," in *New Companion to Digital Humanities*, ed. Susan Schreibman, Ray Siemens, and John Unsworth, (Oxford: Wiley Blackwell, 2016), 202.

"Virtual Cartographies" provides scholars and the public with a geospatial visualization of the multimedia elements being produced by the Spanish public. Ian Gregory, et al., (2004, 2) explain the key advantage to deep mapping: "it allows the user to explore not only what is occurring but also where it is occurring and, by extension, how things occur differently in different places".[26] By layering digital cultural materials centered on the exhumations onto a cartographic interface, users of the map can view what types of resources are associated with specific places to draw comparisons and signal differences about the recovery efforts across different locations.

Thick maps are also particularly well-suited for representing the evolving nature of the continued exhumation process and reburials occurring around the Peninsula. With the continual addition of digital materials about the recovery and commemorations honoring them, a thick map spatially organizing multimedia elements allows for the growth of materials to be included within the visualization:

> It is, in short, a new creative space that is visual, structurally open, genuinely multimedia and multilayered. Deep maps do not explicitly seek authority or objectivity but provoke negotiations between insiders and outsiders, experts and contributors, over what is represented and how. Framed as a conversation and not as a statement, they are inherently unstable, continually unfolding and changing in response to new data, new perspectives, and new insights.[27]

"Virtual Cartographies" does not proffer a hypothesis on, or an analysis of, the digital materials embedded on the map and it does not perform complex geospatial analysis of the digital texts. Instead, it provides a space for scholars and the public to approach place-based materials and visualize the interconnectedness of community recuperation efforts. The analysis of the materials occurs within essays such as this, the pages of my dissertation, and on the website hosting the map.[28] The emergence of web applications combined with digital mapping platforms (such as Google My Maps, ESRI Story Maps, StoryMapJS, Carto DB, and ArcGIS, for example) will effectuate a paradigmatic shift in the way humanities scholars reflect on the past: "spatial technologies are being used in tandem with web applications in ways that make them eminently suitable for humanities scholarship, and it is this combination that promises a revolution in the

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[26] Ian Gregory, et al., "Crossing Boundaries: Using GIS in Literary Studies, History, and Beyond," in *Keys for Architectural History Research in the Digital Era,* ed. Juliette Hueber and Antonio Mendes da Silva. (Actes de colloques: Institut national d'histoire de l'art, 2014), 2. http://journals.openedition.org/inha/4931.

[27] Bodenhamer, Corrigan and Harris, "Introduction," in Bodenhamer, Corrigan, and Harris, *Deep Maps*, 4.

[28] Kurtz, "Virtual Cartographies," www.virtualcartographies.com.

ways we think about the past".[29] Content Management Systems give scholars a space to contextualize digital maps built for distribution on the web. For example, the website I built to accompany "Virtual Cartographies" provides necessary background information about the project, the decision-making process that went into developing the metadata schema, includes a description of the resources embedded on the map, etc.[30] Rather than merely distributing a thick map imbued with digital cultural materials without any contextualization, web applications give humanists a space through which to describe the didactic and pedagogical implications of their projects.

Visualization of Mass Graves

"Virtual Cartographies" does not represent the only mapping effort pertaining to mass graves recovery. One of the most recognized visualizations of mass grave recovery in Spain is a digital map published by the SMJ and based on information provided by regional authorities and historical memory associations (Figure 1).[31]

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[29] Bodenhamer, Corrigan and Harris, "Introduction," in Bodenhamer, Corrigan, and Harris, *Deep Maps*, 2.

[30] Kurtz, "Virtual Cartographies." While the "Virtual Cartographies" map itself hosted is on the uMap servers, it was imperative to present the map in a contextualized style. I could have chosen to share the project using the direct link to the map on the servers, but the uMap interface did not provide enough space to describe the research questions, methodology, and datasets that went into the creation of the map. In order to clearly express the goals of the project to the user, it was necessary to build a website to house the map. I built a website that embeds the map within a cohesive framework that includes a transparent description of the decision-making process that lead to its construction. The website is straightforward and only has five pages: 1) Home, 2) Map, 3) About, 4) Datasets, and 5) Contact.

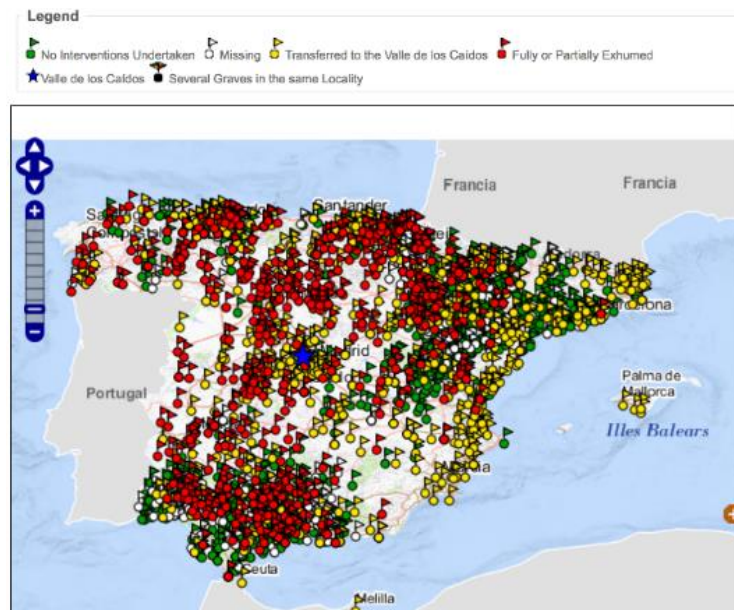[31] Gobierno de España, "Map of Graves."

Figure 1: "Map of Graves," "Memoria Histórica." SMJ.

The dataset was constructed with the cooperation of autonomous communities, and local and regional historical memory associations based off their continued exhumation efforts, as explained on the website that hosts the map:

> the data used to create the Map comes from the information sent to the Ministry of Justice by the different Autonomous Regions that signed the collaboration agreements and by Associations, Foundations or Entities dedicated to recovering historical memory, whose research has received subsidies from the Ministry of the Presidency.[32]

Since national government entities do not participate in the location, exhumation, or memorialization of gravesites, they rely on the information supplied by associations like the La Asociación para la Recuperación de la Memoria Histórica ("The Association for the Recuperation of Historical Memory") (ARMH) and other local groups for the actualization of the dataset. As one of the measures of the Historical Memory Law, the Ministry developed a map that reveals areas with the remains of victims along with the recuperation status of the gravesites.[33]

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[32] Gobierno de España, "Map of Graves." "Information."

[33] Purportedly updated biannually, the government's map identifies if a mass grave has been fully or partially exhumed (red), has yet to be opened (green), is missing (white) or has had its contents moved to the Valley of the Fallen, a vast underground mausoleum built on Franco's orders near Madrid (yellow). Along with indicating the status of exhumation, a user can click on any point on the map to pull up further metadata about the gravesite. In addition to the mapping interface, through an available search function, users can search for specific location for the gravesites.

Along with providing the map, and as part of the Historical Memory Law, the SMJ also publishes the data they use as the base of their visualization. The National Catalogue of Open Data is housed online and acts as the access point to datasets that the government makes available for reuse.[34] The dataset titled: "Graves or burial sites in the Spanish territory" is purportedly updated twice yearly as the disinterments continue.[35]

By layering the multimedia materials, "Virtual Cartographies" contributes to the recuperation of collective memory in Spain by assisting in the contextualization of emerging memories and place-making around the sites of disinterment and subsequent inhumations. Currently, no comparable thick mapping efforts exist for the layering of cultural artifacts in relation to mass grave recovery or historical memory. While the SMJ and various autonomous communities have constructed maps of mass grave, these maps cannot be considered thick maps.[36] These maps display single layers of data for the space-specific site of the grave, along with available metadata about how the site arose and its stage of exhumation.[37] These are useful for the locating of mass graves and

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[34] Ministerio de Justicia, "Fosas o lugares de enterramiento en el territorio español - Catálago de Datos," accessed August 31, 2018. http://datos.gob.es/catalogo/e00003901-fosas-o-lugares-de-enterramiento-en-el-territorio-espanol.

[35] As a condition of use, the SMJ requires that the most current version of the data be displayed in any project. However, the SMJ has not updated the dataset since December 18, 2015. The delay in actualizing the information could be attributed to the election of the conservative Partido Popular in December 2011, which eliminated all State funding to realize exhumations (Ferrándiz, "From Tear to Pixel" 4). Despite claiming that "the information incorporated into the map to date is a first draft or initial version of the map and that it will be completed over time as part of an ongoing, dynamic process in which burial places already located have yet to be marked and this map will be subject to both the addition of new locations as well as constant updates of the data included about mass graves that have already been located," the map has not changed since its initial publication. Gobierno de España, "Map of Graves." "Information."

[36] Private entities and regional communities have also constructed digital maps to visualize mass grave locations around the peninsula using the same dataset. Maps produced by autonomous communities such as The Canary Islands "Mapa de Fosas," Aragon "Visor de Memoria Histórica: Fosas Comunes de Aragón," emulate the structure of the visualization built by the Ministry of Justice and all utilize the master dataset stored and updated by the SMJ. Other digital cartographic representations have been created by regional and autonomous communities that emulate the same layout as the SMJs map: Asturias ("Mapa de fosas comunes de Asturias – Mapa Interactivo"), Catalonia ("Fosses i Repressió"), and Navarre ("Visor de fosas de Navarra.") The maps geographically locate gravesites and include the metadata about the specific site, as indicated on the government's dataset. The ARMH maintains their own digital map where they document the sites they exhume and include narratives within the map pinpoints regarding the disinterment process ("Mapa de la Memoria"). The data used for the ARMH map differs in scope and content from the other visualizations discussed herein because they only include data for the exhumations they undertake, excluding all other gravesites.

[37] Simply defined, metadata is data about data. Metadata is the underlying information about a specific artifact. In the case of the items included in "Virtual Cartographies," metadata can refer to

for discovering the state of their exhumation, but they provide little to no background about the surrounding space.

Rather than visualize the status and metadata of the gravesites, "Virtual Cartographies" spatially designates the ever-growing corpus of digital media about the recuperation of specific gravesites alongside collected data about those locations. The combination of digital media with information regarding specific sites helps to expand on the data-driven aspect of the SMJ's map. "Virtual Cartographies" bridges the gap between digital maps that are representations of locations and visualizations that generate knowledge. Johanna Drucker describes the difference between visualizations that represent information already known and visualizations that are capable of being knowledge generators:

> knowledge generators are graphical forms that support combinatoric calculation. Their spatial organization may be static or mobile, but their spatial features allow their components to be combined in a multiplicity of ways. They make use of position, sequence, order, and comparison across aligned fields as fundamental spatial properties.[38]

"Virtual Cartographies" does not perform spatial analysis, but instead visualizes gravesites alongside media pertaining to specific locations.[39]

Historical Memory on the World Wide Web

Scholars of Spanish culture have studied the recuperation of historical memory through the mediums of mass communication like newsprint and television (Barbosa 2001; Sánchez González 2004; Mateu and Piquer 2015; Sampedro and Baer 2003).[40] The focus on Internet and social media sites and the

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information about a digital artifact, such as a video, audio file, image, (such as the publisher, links to the file, date of publication) but it can also refer to a specific gravesite. Information about the site can include not only its location, but how many bodies reside in the grave, the exhumation status, type of gravesite, etc.

[38] Johanna Drucker, *Graphesis: Visual Forms of Knowledge Production*, (Cambridge: Harvard University Press, 2004), 105.

[39] Rather than constructing a database that catalogues digital cultural materials where users could search or filter by a variety of fields (such as location or media type), a digital map permits users to easily select media pertaining to a specific region or area, and further reduce selections to media types (i.e. articles, audio files, films, websites, etc.)

[40] Marialva Barbosa, "Medios de comunicación y conmemoraciones: Estrategias de reactualización y construcción de la memoria," *Signo y Pensamiento* 39 (2001): 104-112; Juan Sánchez González, "Sobre la memoria. El pasado presente en los medios de comunicación," *HAOL* 4 (Primavera 2004): 153-163; Ferran Sáez Mateu and Elena Yeste Piquer. "Disfunciones en el tratamiento mediático de la memoria colectiva," *Argos* 32, no. 62 (2015): 131-149; Victor Sampedro and Alejandro Baer, "El recuerdo como olvido y el pasado extranjero. Padres e hijos ante la memoria histórica mediatizada," *Revista de Estudios de Juventud. Número especial: Jóvenes, Constitución y cultura democrática* (2003): 93-108.

exploration of cultural materials from the World Wide Web concerning the Spanish Civil War, Francoism, and the recuperation of historical memory has begun to take shape with critical attention focusing on these digital sites of memory (Berruga 2015; Eiroa 2016; Eiroa, et al. 2014; Ferrándiz 2008).[41] However, the discussion of social and digital media on the web pertaining to mass grave recovery has been largely overlooked. Other than Francisco Ferrándiz's brilliant chapter (Ferrándiz 2016), the conversation among scholars has revolved around representation of historical memory, in general, rather than representations of mass grave recovery online.

In Matilde Eiroa, *et al.*'s article, the communications scholar and her research team explore (web)sites of memory and the varying modalities of weblogs and divide them into three distinct categories: biographic blogs, didactic blogs, and cultural blogs (362). The multiplicity of blogs and social media networks exhibit the need for Spaniards to publicly present and discuss recuperation efforts within an online community.[42] Moreover, digital memory differs from traditional modes of collective memory recuperation. Lucía Berruga describes the crucial difference between digital memory artifacts and traditional, autobiographical oral testimony:

> Dentro de la memoria digital se encuentra una separación en el relato que se construye a partir de ella y el relato tradicional, ambos siguen siendo personales pero con grandes diferencias: el tradicional es el testimonio oral autobiográfico y el de la memoria digital es un testimonio mediado por una página virtual que se convierte en un testimonio compartido en la red desde el momento en que es publicado.[43]

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[41] Lucía Berruga Sánchez, "La memoria nostálgica a través de Internet y de las Historias de vida: confrontaciones generacionales de las historias de barrio," *Historia y Comunicación Social* 20, no. 2 (2015): 391-411; Eiroa, Matilde, "La Guerra Civil on line. Un pasado que no se olvida," *Bulletin Hispanique* 118, no. 1 (2016): 33-48; Eiroa, et al., "Actualidad cibermediática"; Francisco Ferrándiz, "Cries and Whispers: Exhuming and Narrating Defeat in Spain Today," *Journal of Spanish Cultural Studies* 9, no. 2 (2008): 177-192.

[42] Many of the websites on historical memory look back to the past in an attempt to accurately document the atrocities masked for decades by the Franco regime, and later by the democratic government. Using government documents, logs, photographs or testimonies, these websites attempt to recompile a history ("Memorias de la Guerra Civil Española – Republica;" "Todos los nombres" [microhistories]; "Memòria Repressió Franquista"; "Estación Malagueña"; "Estación Atlántica.") Other sites are dedicated to locating the missing victims ("Asociación para la Recuperación de la Memoria Histórica"; "Asociación por la Recuperación de los Desaparecidos en el Franquismo"; "Guerra Civil Española y sus víctimas"; "Fosa Común"; "Manuel Barreiro Rey: Resistente con causa.") Still other sites are devoted to specific areas or events where graves arose during the War and postwar (Las Merindades en la memoria; Primer Ejército de Maniobra - Batalla de Brunete; Guerra Civil en Melilla: 1936-1939.) Blog posts about the recuperation of mass graves compliment these types of general websites on historical memory recuperation.

[43] Berruga, "Memoria nostálgica," 406.

The concept of a shared memory created through online social media sites and weblogs signals them as crucial elements for the recuperation of collective memory. Once the creators of the blog posts, websites, videos, and photographs publish their media online, they become shared or collective memory through the web. By documenting rituals online, social networks assist in recovering and defusing historical memory materials regardless of the mediation effects of technology and distribution modes.

The ARMH Online

The ARMH formed in 2000 and organized around the first disinterment led by a team of scientists that sought to catalogue and identify the remains of a mass grave in the leonese municipality of Priaranza del Bierzo. Sociologist and journalist, Emilio Silva, grandson of one of the thirteen victims recovered from Priaranza del Bierzo, founded the organization alongside Santiago Macías, and a team of archeologists, forensic scientists, and community volunteers. The exhumation at Priaranza del Bierzo represents the first where a team of scientists documented, analyzed and shared the findings from the excavation of a site. The ARMH represents a strong force in the recovery of mass graves: "la ARMH ha exhumado desde el año 2000 más de 150 fosas por todo el país rescatando más de 1.400 víctimas de la dictadura franquista, dándoles identidad, devolviéndoselas a sus familiares y promoviendo el homenaje institucional que estas personas se merecían y que durante tantos años les fue negado".[44] Due to their positionality as the first official entity to organize around the recuperation of mass graves, and their extensive involvement in the exhumations, the ARMH's digital footprint extends across all social media platforms. As quoted above, a core objective of the ARMH is to identify and return the remains of victims to the families and encourage institutional commemoration.

As part of their website, the ARMH publishes archeological reports on the exhumations they spearhead.[45] The ARMH leads many of the exhumations around the Peninsula and, as such, publish a variety of original digital materials online. The digital texts created by the ARMH serve to support the exhumation process of the sites. The digital texts focused on the exhumation result as a consequence of specific exhumation projects. Along with the written archeological reports, they include links to other pertinent information, such as links to *Flickr* photo albums or *YouTube* videos pertaining to the exhumation referred to in the report. For some exhumations, the ARMH provides a link for the

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[44] "Quienes Somos," Asociación para la Recuperación de la Memoria Histórica, accessed August 30, 2018, http://memoriahistorica.org.es/que-es-la-asociacion-para-la-recuperacion-de-la-memoria-historica-armh-2000-2012/.

[45] "Exhumaciones," Asociación para la Recuperación de la Memoria Histórica, accessed August 30, 2018, http://memoriahistorica.org.es/category/s5-documentos/c46-libros-de-visitas/.

download of a *libro de visitantes* or a [visitors' book](#).[46] The visitors' book is left on display throughout the exhumation period and visitors to the recovery sites can write comments and words of encouragement within its pages. The ARMH then digitizes the books and transcribes the written comments into typeface. The handwritten comments are preserved next to the transcribed version of the comment (Figure2). The collection of remarks in the visitors' books memorializes and preserves the respects paid at the site of exhumation. Like the analogue condolences or guestbook at many funerals, these digitized and transcribed books provide a physical space of remembrance that can be reproduced, searched and distributed to all the familial and affiliative relations. The recovery of the bones from grave sites brings forth the written manifestations of mourning.
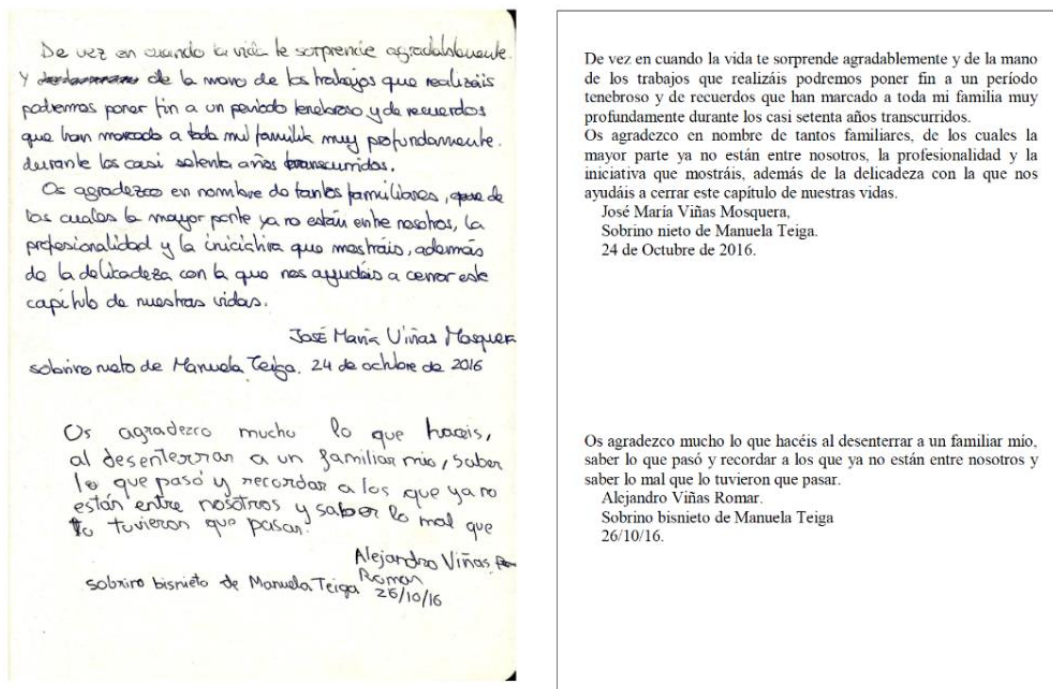

Figure 2: Sample Page from the ARMH's "Libro de Visitantes." October 2016. Exhumation in Igrexa Paramos (A Coruña).

The ARMH's website makes evident the reach the Association has across all social networking sites. The ARMH uses *YouTube* (for videos) and *Flickr* (for

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[46] "Libro de Visitantes: Exhumation in Igrexa Paramos (A Coruña). [PDF document]." Asociación para la Recuperación de la Memoria Histórica, accessed August 30, 2018, http://memoriahistorica.org.es/wp-content/uploads/2016/10/1610-Libro-visitas-Exhumaci%C3%B3n-Igrexa-Paramos-AC.pdf.

images) to share the digital media they produce of the disinterment processes.[47] They use these social networking sites as digital archives for the photographs and videos from the exhumations and reburials. In addition to embedding the relevant links to videos, photographs, and visitor log books alongside the archeological reports, the ARMH has a "Gallery" section on their website where they have a page for images and a page for videos. On both the images and videos pages, users can scroll through media elements chronologically, with the most recent item appearing first.[48] Scrolling through the galleries on the page in this manner, however, makes contextualization of the images and videos difficult. Because there is no differentiation between albums on the ARMH website, photos of exhumations appear next to photos of exhibitions, appear next to photos of commemorations. The random collage of images makes it difficult to decipher the location and date in which the digital media was created. To combat the purely chronological organizational structure of the digital materials on their website, the ARMH provides direct links to their image and video repositories hosted through *YouTube* and *Flickr*.

Flickr

The ARMH's *Flickr* account has an impressive collection of 124 albums and 1,931 total photos since opening their page in 2014.[49] *Flickr* provides a way to move digital content (mainly photos, but also video) from any device (phone, computer, photo editing software) and gives users a straightforward way to "push" or share that information on the web. Through their *Flickr* account, the ARMH shares images from disinterments, but more importantly, they document the process of the exhumations: 1) from exploratory drilling to locate the grave sites, to 2) the exhumation, to 3) rituals of reburial and 4) rituals of commemoration. They have created separate albums for each exhumation site and for most of the albums have labeled them with the type of activity found within ("homenaje," "exhumación," "prospección") making the current state of disinterment easily discernible. Through their digital representations, the ARMH upholds their mission statement of not only focusing on the exhumations, but also

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[47] Asociación para la Recuperación de la Memoria Histórica, *Flickr* page, accessed August 30, 2018, https://www.flickr.com/photos/memoriahistorica/sets/; Asociación para la Recuperación de la Memoria Histórica, *YouTube* page, accessed August 30, 2018, https://www.youtube.com/user/ARMHmemoria.

[48] Galería—Imágenes," Asociación para la Recuperación de la Memoria Histórica, accessed August 30, 2018, http://memoriahistorica.org.es/imagenes/. Galería—Vídeos," Asociación para la Recuperación de la Memoria Histórica, accessed August 30, 2018, http://memoriahistorica.org.es/videos/.

[49] Asociación para la Recuperación de la Memoria Histórica, *Flickr* page, accessed August 30, 2018, https://www.flickr.com/photos/memoriahistorica/sets/.

the reburial and commemorations associated with them.[50] The photos found in the ARMH's albums pertaining to the commemorations reveal commonalities among rituals of reburials. The trends in rituals performed through the search for sites, at exhumations, inhumations of the remains and yearly remembrances permeate across the Peninsula.

Combinations of the following traits are common among the rituals seen across social media platforms (not only content provided by the ARMH): 1) the decoration of memorial plaques or mass grave sites with flowers, flags (regional and republican), at times, photographs of the victims; 2) speeches describing the events that took place at the grave site and a reading of the names of the identified victims; 3) an artistic tribute—poetic and/or musical/dance (often accompanied by a guitar or wind instruments); 4) the *entrega* or delivery of the remains to the families or community members (generally in the form of an ossuary or urn); and 5) the reburial into a communal pantheon or grave. The commonalities amongst the rituals permeate throughout Spanish territories. The cyclical repetition of these rituals of reburial—from the colors that permeate the landscapes, to the music and poetry, culminating in the return of the bodies and reburial—allow the communities to undergo the therapeutic performance of the reburial every year as additional bodies are identified and reburied. Digital representation of these rituals allow absent family and community members to participate in the rituals virtually, while creating an archive of the digital cultural texts surrounding the reburials.

One of the ARMH albums that guide users through the ceremonies described above surrounding the inhumations is titled "Calañas (Huelva)" from 2009.[51] The ARMH describes the scene in the description of the album: "Exhumación de 11 personas asesinadas el 13 de noviembre de 1937. Eran José Gil Romero, Agustín González Vázquez, Martín González Volante, Fernado Márquez Leandro, Manuel Patricio Valle, Alfonso Pavón Sánchez, José Pavón Sanchez, José Rodríguez Dominguez, Diego Sánchez Delgado, Luis Serrano Delgado y Juan Trigo Campillo." The album begins with photographs of the exhumations (Figure 3) displaying the remains of the victims in the graves as they are exhumed, accompanied by family members at the foot of the grave site. The photographs shift to illustrate the inhumation process. First there are images of the families and community members gathering around the decorated memorial (Figures 4 and 5) and giving speeches (Figure 6) before the gathering. Then a

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[50] Other community members have uploaded their albums and images to *Flickr* to share, but the materials generally relate to the exhumations themselves, rather than the inhumations. For example, user "Hedy760 Recuperando Memoria" joined *Flickr* in 2017 and has added photographs of exhumations (from 2014-2017), as well as documentation of exhibitions and conferences about exhumations.

[51] "Calañas (Huelva)," Asociación para la Recuperación de la Memoria Histórica, *Flickr*, https://flic.kr/s/aHsjSRAV7v.

photograph shows the return of the remains to the families—the *entrega* (Figure 7)—and interment into the final resting place.[52]

Figure 3: Exhumation

Figure 5: Memorial Gathering

[52] Figure 3. Asociación para la Recuperación de la Memoria Histórica, *Homenaje y entrega de restos*. February 19, 2014, Digital Image. Available from: *Flickr*, https://www.flickr.com/photos/memoriahistorica/12634002344/ (accessed August 30, 2018). Figure 4. Asociación para la Recuperación de la Memoria Histórica. February 19, 2014, Digital Image. Available from: *Flickr*, https://www.flickr.com/photos/memoriahistorica/12634002944/ (accessed August 30, 2018). Figure 5. Asociación para la Recuperación de la Memoria Histórica, *Homenaje y entrega de restos*. February 19, 2014, Digital Image. Available from: *Flickr*, https://www.flickr.com/photos/memoriahistorica/12633533785/ (accessed August 30, 2018). Figure 6. Asociación para la Recuperación de la Memoria Histórica. February 19, 2014, Digital Image. Available from: *Flickr*, https://www.flickr.com/photos/memoriahistorica/12634002764/ (accessed August 30, 2018). Figure 7. Asociación para la Recuperación de la Memoria Histórica, *Homenaje y entrega de restos*. February 19, 2014, Digital Image. Available from: *Flickr*, https://www.flickr.com/photos/memoriahistorica/12634003204/ (accessed August 30, 2018).

Figure 4: Memorial Gathering

Figure 6: Speeches

Figure 7: Return of the Remains in Ossuaries

The process of physically holding an ossuary with the remains sought for generations, as seen in Figure 7 followed by the placing of those remains in a dignified memorial before a witnessing audience (both actual and virtual), combats decades of silence surrounding the mass grave through the exposition of

the reburial. The final photo in the series shows the plaque on the tombstone where all of the families inhumed the victims together.[53] The connection between familial and affiliative relations solidifies by entombing the bodies together after the exhumation, rather than in individual graves. While the physical tombstone remains immobile, the dissemination of the rituals shares the mourning process and fosters recognition of the reburial through the virtual community online. The sequence of rituals shown through the progression of photographs in the ARMH album illustrates common trends found in commemorations happening around the Peninsula. The digital representations are shared virtually with other familial and affiliative relations who have undergone the same traumatic experiences of loss.[54]

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[53] Asociación para la Recuperación de la Memoria Histórica, Homenaje y entrega de restos. February 19, 2014, Digital Image. Available from: *Flickr*, https://flic.kr/p/kfoaCc, (accessed August 30, 2018).

[54] Apart from the ARMH, other individuals and historical memory groups contribute to the available media on *Flickr*. Carrying out a keyword search within *Flickr* of "fosa común" and "España" produces another 945 images, apart from those of the ARMH. When searched using keywords, *Flickr* shows a collage of images compiled using "tags" attributed to the photos in order to aggregate them. While some of the search results yield the expected images of cemeteries and exposed gravesites in the midst of exhumation, other photos make the user stop and consider if the photograph was mistagged. For example, see the black and white photo of a gas station titled "Petrol Station" (Figure 8). Upon closer inspection, the hammer and sickle spray-painted on the walls of the station signal an alternate history. Seemingly out of place with the other images of exhumations, clicking on the image reveals that the site where the gas station stands was a mass grave now covered by the crumbling edifice. The photographer, Jon Cazenave, from San Sebastian describes the photo as a "communist petrol station," but the tags he uses on the photo discloses a deeper layer of information about the space. Cazenave assigned the following tags to situate the photograph: "civil, war, spain, zamora, disappeared, memory, denied, history, common, grave, fosa, common, españa, franco, esqueleto, muerte." From the tags, the user deciphers that the photo depicts the site of a mass grave in Zamora, Spain, now erased by the presence of a desolate gas station. The black and white exposure the photographer deliberately selected gives the image additional profundity by recalling the connection of this contemporary site to the past. The written descriptions that accompany the image, the composition in black and white, and the selected tags tell the story behind the photo and invite the users on *Flickr* to question the photograph.

YouTube

Like the ARMH's album that documents the memorial process, many of the videos posted on *YouTube* by the ARMH and other community members reflect the same ritualistic process.[55] As opposed to images, videos capture both the audio and visual elements relevant to the inhumations. Matilde Eiroa and a team of communications scholars recognize the merits of *YouTube* as a pedagogical resource for the recuperation of historical memory: "En el entorno audiovisual, la reproducción de videos y documentales a través de *YouTube* constituye un recurso de gran valor pedagógico. Son incontables los videos que reproducen imágenes de la época, fotografías, documentos sonoros, e incluso conferencias de especialistas sobre el tema" (363).[56] *YouTube* channels dedicated not only to the Spanish Civil War, but also to the collection of testimonies from numerous individuals centered on the exhumation of mass graves, pervade the video-sharing platform.

The ARMH has a collection of 123 videos on their [*YouTube* channel](#) from various disinterments, but most of the videos are either testimonies from survivors, videos of news broadcasts regarding the ARMH or their activities, commemorations of anniversaries (like the [*Día Internacional del Desaparecido*](#)) of judicial or political events, or of conferences. Despite dedicating several albums in *Flickr* to the rituals of reburial, a minority of the videos shows the exhumations and commemorations. Instead, much of the video content regarding

Figure 8: Jon Cazenave. "Petrol Station." *Flickr*.

[55] Asociación para la Recuperación de la Memoria Histórica, *YouTube* page, accessed August 30, 2018, https://www.youtube.com/user/ARMHmemoria.

[56] Eiroa, Matilde, et al., "La guerra civil Española en la actualidad cibermediática," *Studia Histórica. Historia Contemporánea* 32 (2014): 357-369.

commemorations comes from individuals, community entities, and local historical memory associations.[57] Historical memory associations (Federación Estatal de Foros por la Memoria and ARMH, for example) become mediating factors between survivors and digital texts produced for the web. The Associations become an intermediary— alongside the physical technology and modes of distribution—between the audience and the producers of digital media. Each group has its own stance on how exhumations should be accomplished and their aims do not always align.[58] Despite their differences, they still publish much of the video and photographic material relating to the exhumations occurring on Spanish territories.

   "Foro por la memoria: Campo de Gibraltar" has a *YouTube* channel where they publish the exhumations, reburials and commemorations from a mass grave located at a former farmhouse in El Marrufo near La Sauceda in the andalusian province of Málaga in southern Spain.[59] In one series of five videos, the recordings follow the reburial of 28 identified victims from the mass grave at El Marrufo. The series begins with the unveiling of the plaque honoring the site of the grave ("Acto-homenaje a los fusilados en el Marrufo,") is followed by the reading of a poem in honor of the reburial ("Cantante y poesía para el recuerdo,") leading to the literal unveiling of the twenty-eight ossuaries ("Las 28 vítimas de las Fosas del Marrufo,") and ends with the delivery of the remains to community members and the inhumation of the twenty-eight bodies together ("Traslado de las víctimas al Panteón de la Dignidad").[60] The videos take the viewer through the process of commemoration as the families complete the ritual of reburial in the

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[57] The scarcity of videos from the ARMH pertaining to the reburials could be due to the fact that the Association leads the charge in locating, prospecting, and exhuming the remains, but not in organizing the yearly commemorations. The community members, on the other hand, arrange the commemoration events and establish the protocol for memorialization. Additionally, since some of the rituals extend beyond the inauguration of the memorial site with the initial entombment, and include annual memorials where the ARMH is absent, community members would lead the charge in digitally memorializing the rituals of reburial.

[58] For a thorough discussion on some fundamental differences between historical memory associations, see Ferrándiz, "From Tear to Pixel," 242-261.

[59] "Foro por la memoria: Campo de Gibraltar." *YouTube* page, accessed August 30, 2018, https://www.youtube.com/user/foroporlamemoriacg.

[60] Foro por la Memoria del Campo de Gibraltar. "Acto-homenaje a los fusilados en el Marrufo". Filmed December 1, 2012. *YouTube* video, Duration 14:37. Posted [December 1, 2012]. https://youtu.be/BsetbrqVf7M; Foro por la Memoria del Campo de Gibraltar. "Cante y poesía en recuerdo de la [sic.] víctimas". Filmed December 1, 2012. *YouTube* video, Duration 12:55. Posted [December 2, 2012]. https://youtu.be/sAsJTddr1kU; Foro por la Memoria del Campo de Gibraltar. "Las 28 víctimas de las Fosas del Marrufo". Filmed December 1, 2012. *YouTube* video, Duration 00:35. Posted [December 2, 2012]. https://youtu.be/BbNWMv2hl6Q; Figure 9. Foro por la Memoria del Campo de Gibraltar. "Traslado de las víctimas al Panteón de la Dignidad". Filmed December 1, 2012. *YouTube* video, Duration 05:47. Posted [December 2, 2012]. https://youtu.be/9k5zNr3SZxg.

"Pantheon of Dignity" (Figure 9). The video camera provides audio, which allows the audience to hear the words of remembrance and listen to the musical tributes. The audio accompanying the videos helps contextualize the reburial process. The families undergo the cathartic experience of breaking the silence surrounding the mass grave by sharing their memories with a physical and virtual audience. The audience learns about the history of the gravesite and the victims through the commemorative speeches.

Figure 9: Placement of Ossuaries in the "Pantheon of Dignity"

User "Calamar2producciones" shares a short video (67 seconds) of the reburial of 129 victims in Aranda de Duero, Burgos. Pedro Armestre & Susana Hidalgo, a photo and video journalism team, upload a video titled "Entierro de 129 víctimas de la guerra civil española en Aranda de Duero, Burgos".[61] The clip shows the community and family members joining together in a chain to effectuate the ritual of reburial (Figure 10). The 129 ossuaries are passed from person to person as each ossuary makes its way down the line of people until reaching the tomb and final resting place. The video begins with a man standing in the tomb, receiving ossuary after ossuary from an unseen set of hands. As the camera pans out, the line of community members slowly reveals itself to the audience. Rather than each person placing the remains of their kin into the tomb for inhumation, each ossuary passes through the chain of community members, solidifying the connection between the families. Each community member held the bones of the companions that will continue to lie next to their relatives forming a bond amongst families. Each community member had a hand in helping to lay to rest every set of bones from the original grave site.

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[61] Figure 10. calamar2producciones. "Entierro de 129 víctimas de la guerra civil española en Aranda de Duero, Burgos". Filmed November 3, 2013. *YouTube* video, Duration 01:07. Posted [November 3, 2013]. https://youtu.be/GJLJgIoedxQ.

Figure 10: Screenshot of Ossuaries in the Hands of Community Members

Javier de la Puerta shares two videos of the reburial of the remains of twenty-eight people in "Calera y Chozas (Toledo): Fosas. Inhumación en panteón republicanos asesinados por el franquismo" and "Calera y Chozas: Republicanos asesinados. Final inhumación en el panteón".[62] Similar to the video of the inhumation in Aranda de Duero in Burgos by Calamar2productions, the video focuses on the delivery and reburial of each family or affiliative relation carrying the ossuary with the remains up to the pantheon for interment. With a kiss, an affectionate pat or a tear, the family members say goodbye to the remains as they pass them into the pantheon to rest with the other victims that were identified and inhumed once again.

The photographs and videos hosted on *YouTube* and *Flickr* demonstrate a repetition of similar rituals of reburial throughout Spanish territories. The celebration of life and mourning shown through the decoration of monuments with flowers, flags and images, the artistic representations through music and poetry, culminating in the return of the bodies for reburial allow the communities to undergo the prescribed rituals of the reburial alongside other survivors. The digital representations of rituals allow absent family and community members to participate in the rituals virtually, while creating an archive of the digital cultural texts surrounding the reburials. *Flickr* and *YouTube* function as repositories for digital cultural materials surrounding rituals of commemoration. The platforms

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[62] Javier de la Puerta. "Calera y Chozas (Toledo): Fosas. Inhumación en panteón republicanos asesinados por el franquismo". Filmed February 10, 2013. *YouTube* video, Duration 05:12. Posted [February 17, 2013]. https://youtu.be/a3mvJF3-4Mg.; Javier de la Puerta. "Calera y Chozas: Republicanos asesinados. Final inhumación en el panteón." Filmed February 10, 2013. *YouTube* video, Duration 00:32. Posted [February 18, 2013]. https://youtu.be/CIxJBP_ASs0.

act as free digital archives for images and videos, which can then be incorporated into more comprehensive blog posts, websites, and other social networking platforms.

Social Media and Historical Memory

Important for the discussion on mass grave recuperation on social media sites are the *groups* and *pages* functions within *Facebook*: "there are *groups* to which one belongs, either public or private, and which create a more coherent space for collective interaction, compared with the individuated network behaviour more generally presented in a newsfeed" (Allen 215).[63] The *groups* and *pages* become virtual arenas for the exchange of digital cultural materials and generate virtual communities that jointly participate in the recovery of historical memory.[64] The layering of multimedia texts about recovery of specific sites produces a rich mosaic of digital cultural materials that facilitates the recuperation of collective memory while providing a space for community mourning.[65]

The *Facebook* page titled "Crónicas a pie de fosa" demonstrates how social cascading leads to the layering of digital materials regarding the rituals of

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[63] Matthew Allen, "An Education in *Facebook*," *Digital Culture and Education* 4, no. 3 (2012): 213-225.

[64] While the managers of groups and pages can make their sites private, all of the sites for the recuperation of mass graves are open to the public. This means that a user does not need a *Facebook* account to view the materials on the page or in the group but does need an account in order to participate within the group. The openness encouraged by public groups facilitates the sharing of materials and discussions on the recuperation efforts.

[65] *Facebook* maintains the highest level of activity and interaction on the web relating to historical memory. In 2013 Eiroa and her team found and analyzed ten *Facebook* group with 2,195 members (Eiroa, *et al*. 364). Only five years later in 2018, that number has grown to over 30,000 members spread over several of the larger groups. Berruga explains why *Facebook* serves as a better organizational tool than *Twitter* for the digital culture uploaded to the platform: "se puede establecer un orden, pues cuando se crea un grupo, de forma particular en *Facebook*, aparte de los testimonios y comentarios escritos, así como fotografías, subidas al grupo hay otros tres apartados que permiten gestionar la información que se vaya subiendo al medio digital separándola en miembros, eventos, fotos y archivos . . ." (Berruga 408). The framework of *Facebook* allows for an organizational structure unavailable in *Twitter*. *Twitter* essentially becomes a news aggregator for mass grave recuperation where users post links to articles, *YouTube* videos, or other social media content, about exhumations, but upload little original content. The digital materials shared within the tweet are usually not original but compiled from other media platforms and retweeted to followers or other institutions or personalities on *Twitter*, usually with a short reflection on the linked content.

Twitter functions as a link-sharing site where the social cascade propagates the spread of information. As a microblogging platform that uses hashtags to organize content, *Twitter* is not the ideal application for the complex sharing of ideas and digital cultural materials regarding mass grave rituals. The 140-character limit to all tweets severely impinges on the ability to make detailed commentary about mass grave recuperation and historical memory.

reburial.[66] "Crónicas a pie de fosa" is a weblog authored by husband and wife pair Jesús Pablo Domínguez Varona and Aiyoa Arroita Lafuente who focus predominantly on mass grave recovery in Burgos.[67] In addition to their website, the couple maintains a *Facebook* page to share recent blog posts from their weblog, links to relevant news articles, and interact with other individuals and entities interested in the exhumation process. The "Crónicas" *Facebook* page posted and shared a series of digital materials regarding the annual commemoration at the mass grave located next to the former prison in Valdenoceda. The mass graves at Valdenoceda are located at a prison used by the Regime from 1938-1942 in Valdenoceda in northern Burgos. In 2007, the *Asociación de Familias de Represaliados en Valdenoceda (Burgos)* ("Association of Families of Victims of Reprisal in Valdenoced"), with the help of the Sociedad de Ciencias Aranzadi and the Universidad Autónoma de Madrid, disinterred the remains of 114 people held prisoner by the Regime.[68] After a long discovery and exhumation process due to lack of funds, the remains recovered in 2007 have slowly been identified through DNA testing. "Crónicas" shares the digital materials they created during the commemoration and combines that with additional digital materials found in their friends' networks to display the commemorative rituals. The shared materials emulate those outlined through the various *YouTube* and *Flickr* imagery. The "Crónicas" page uploaded an image of the decorated tomb with flowers, flags (regional and republican) (Figure 11), as well as a photo album with images of the musical tributes and speeches (Figure 12).[69]

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[66] Jesús Pablo Domínguez Varona and Aiyoa Arroita Lafuente "Crónicas a Pie de Fosa." *Facebook*, accessed on August 30, 2018, https://www.facebook.com/cronicasapiedefosa/.
[67] Jesús Pablo Domínguez Varona and Aiyoa Arroita Lafuente, "Crónicas a Pie de Fosa," accessed 30 August 2018, https://cronicasapiedefosa.wordpress.com/.
[68] Asociación de Familias de Represaliados en Valdenoceda (Burgos), accessed August 31, 2018, https://exhumacionvaldenoceda.com/.
[69] Figure 11. Crónicas a pie de fosa. 2018. "Todo Preparado en Valdenoceda para el homenaje anual." *Facebook*, April 22, 2017. https://www.facebook.com/cronicasapiedefosa/posts/1814172528800332:0. Figure 12. Crónicas a pie de fosa. 2018. "Homenaje en Valdenoceda" *Facebook*, April 22, 2017. https://www.facebook.com/triskel.bilbao/posts/1446603015412768.

Figure 11: Decorated Tomb and Monument

Figure 12: Uploaded Photo Album with Tributes

"Crónicas" supplements the digital materials they upload with other representation of the commemorations to compliment and complete the rituals represented. They share photos of the congregation and the musical tribute from the Exhumación de Valdenoceda's *Facebook* page (Figure 12) and speeches describing the events that took place and the individuals effected (Figure 13).[70]

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[70] Figure 13. Crónicas a pie de fosa. 2018. "Valdenoceda 2017." *Facebook*, April 24, 2017. https://www.facebook.com/cronicasapiedefosa/posts/1814959322054986; Figure 14. Crónicas a pie de fosa. 2018. "Valdenoceda 2017." *Facebook*, April 24, 2017. https://www.facebook.com/cronicasapiedefosa/posts/1814963188721266.

Figure 13: Shared Image from "Exhumación de Valdenoceda's" *Facebook* **Page**

Figure 14: Shared Image from Jokin Garmilla's Personal Page

The collage of memories compiled from personal digital materials created, together with digital texts found through the social cascade fuse together to present a collective view of the rituals of mourning. *Facebook* allows for the sharing of textual resources and audiovisual materials with people of similar opinions. These groups are comprised of members that choose to join or follow the group and these are generally people with similar ideological opinions. With over 30,000 members spanning across several active *Facebook* groups dedicated to historical memory, the scope of these groups varies, but each provides a community space to discuss the recuperation of historical memory and the exhumation of familial and affiliative relations.[71]

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[71] The following active *Facebook* groups dedicate their content to historical memory (as of August 2018): "Guerra Civil Española (Espanhola)-O Revolución Social" currently with 27,509 members (https://www.facebook.com/groups/234589516628356/); "Plataforma Memoria Histórica - Guerra Civil Española" with 9,214 followers and 9,395 likes (https://www.facebook.com/Plataforma-Memoria-Hist%C3%B3rica-Guerra-Civil-Espa%C3%B1ola-219608795906/); Fusilamientos Madrid Memoriaylibertad with 8,419 followers and 8,467 likes; "La Guerra Civil Española" with 4,513 members (https://www.facebook.com/groups/378972102146174/?ref=br_rs); "Crónicas a pie de fosa" with 2,073 followers and 2,023 likes (https://www.facebook.com/cronicasapiedefosa/); "Memoria

The anniversary of the proclamation of the Second Spanish Republic on April 14, 1931, is widely commemorated date and rituals of remembrance are often performed at sites of reburial of Francoist victims. Using *Facebook Live*, users broadcast, in real time, the commemoration rituals from around the country.[72] An example of the *Día de la República* commemoration comes from a *Facebook* Live video filmed by "Junkar Galba." Galba's *Facebook* page is open to the public and his live video was shared on various historical memory sites, therefore any user with an account can comment on the video in real-time.[73] This real-time experience allows for a transactive recuperation of historical memory, where online community members can comment on and interact with other viewers and physical attendees while watching a live video. Junkar Galba streams a live-feed video from a commemoration in at the cemetery in Ciriego, Santander. The only text accompanying the video reads: "Ciriego 14 Abril 2017." Ciriego is the site of a large mass grave where approximately 850 to 1,300 bodies reside. While family members have erected memorial plaques in the cemetery, they still seek the recovery of the bodies from the grave. In December 2015, the organization *Ganemos Santander* brought a motion before the local government office, the Ayuntamiento de Santander, to hold them accountable for bringing to fruition the exhumations, citing the Law of Historical Memory as their support. In Galba's video, a commemoration in remembrance of those who lost their lives at the hands of the Regime, occurs at the site of the grave, in front of the decorated plaques with the names of the victims from the town.

The video contains several speeches, and near the end they hold a minute of silence to honor the victims: "Vamos a guarder un minuto de silencio por las vítimas de la repressión franquista en Cantabria que yacen, un número importante de ellos, bajo nuestros pies" (16:08-17:45.)[74] The moment of remembrance is observed both in-person and virtually. Despite the ability to post live comments during the live video stream, users watching the broadcast online emulate the actions of the physical participants. The virtual community reflects the actions of the physical community as they observe the moment of silence by eliminating their discussion on the live feed. The video stream lasts 21:08, was shared over forty-six times, and had 1,500 views and fifty comments within three days of the

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Histórica de España" with 1,670 followers and 1,641 likes (https://www.facebook.com/archivosdememoriahistorica/?ref=br_rs).

[72] *Facebook Live* launched on 6 April 2016, and enables users to post live videos from their mobile devices to their *Facebook* pages. Rather than record a video of an event and upload it to *Facebook* after the event concludes, *Facebook* Live allows users to stream events as they occur. Users' comments are time stamped, and as the video plays after the event concludes, the comments appear at the time they were posted during the live feed.

[73] Juankar Galba. 2018. "Ciriego 14 Abril 2017." *Facebook*, April 14, 2017, Duration 20:58. https://www.facebook.com/juancarlos.balbas.3/videos/10211658122876083/.

[74] Ibíd.

event. The *Facebook* page for the "Crónicas" weblog shared the video. The forty-four shares to individual walls and other historical memory *Facebook* groups generate conversations on those walls, propagating other discussion on the grave and the rituals of commemoration.

Galba's video also signals the importance of these sites of remembrance. They provide a community space for mourning, both physically and virtually. As the top comment on the video notes: "Me falló la persona que me iba a llevar pues esta [*sic*] enferma lo siento un montón" (at 05:11).[75] While the individual could not physically attend the commemoration, he or she was able to watch the proceedings in real-time, surrounded by other *Facebook* users, actively commenting on the event. The virtual sites of remembrance are places for communities to gather beyond the exhumation and inhumation and pay homage to their family members. The virtual communities fostered online extend the reaches of the local neighborhood and also help extend the recovery of memories through the first, second, and third generations after the Civil War. The digital memories fostered through social media sites often pertain to the younger generations; these are the postmemories formed and contributed by the children and grandchildren of those that lived during the War and postwar. Videos such as the ones on *Facebook*, which are shared from wall to wall, viewed, and commented on, foster recuperation efforts through local and virtual communities. Social networking creates an ever-evolving landscape of commemorations, remembrance and rituals that extend beyond the reburial of bodies by allowing the continued discussion and dissemination of digital cultural materials.

The digital manifestations that arise out of these commemorations diffuse the rituals to a wider audience that witnesses the rituals. The *YouTube* videos, ARMH *Flickr* album analyzed, and the *Facebook* posts show nearly identical commemoration rituals: a community gathering around the decorated memorial monolith, speeches, and artistic tributes through music and dance. The juxtaposition of digital media content produced by a witness, presented next to a collective narrative about the content, gives a contextualized view of the exhumation and rituals of commemoration. The remainder of this essay describes how the integration of digital cultural materials can merge onto one cartographic interface in order to further imbue spatial, social and historical features onto the materials in order to further contextualize places of recovery, mourning and commemoration.

"Virtual Cartographies" Project Goals

"Virtual Cartographies" has three main goals: 1) to display multiple data layers (Ministry of Justice dataset together with digital media elements), 2) to present the information in a non-linear structure, and 3) to cluster multiple

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[75] Juankar Galba. 2018. "Ciriego 14 Abril 2017."

resources for one geographic area. Each of these goals is further described below. The first step for the project was the determination of the audience for the map. I considered questions such as: who would be visiting the map, how would they access it, and what interfaces (or controls) would they need to make the map meaningful. The audience I envisioned was both scholarly and general. Because the recovery of historical memory is a local, regional, national, and international event affecting people from around the world, "Virtual Cartographies" seeks to be an inclusive site designed for the use of researchers, communities and the general public.[76]

Datasets

Before evaluating mapping platforms and undertaking the construction of prototypes, I collected and structured data for upload into the different GIS platforms. I built data sheets for the multimedia components in Google Sheets, rather than Microsoft Excel, because it enabled collaboration and consultation on the data with other parties.

Mass Grave Dataset

As previously discussed, I acquired the mass grave dataset from the SMJ's online catalogue of public data.[77] As the baseline and commonly accepted standard for the mass grave data available, I left the metadata from the SMJ nearly untouched. The only information I modified was the addition of longitude and latitude (or the X/Y coordinate) details for the gravesites.[78]

One question that arose while working with the data from the SMJ was that of spatial ambiguity. As previously explained, the locations of the graves on

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[76] To facilitate the distribution and access to the map, I determined that it should be accessed through the web, rather than using locally installed applications or software.

[77] Ministerio de Justicia, "Fosas o lugares de enterramiento en el territorio español."

[78] The SMJ's dataset included location information by listing the gravesite name, followed by the town, city, autonomous community and country. Using the geographic coordinates (longitude and latitude) makes it easier for GIS systems to read the exact location, rather than parsing through several columns of data to compile an address. Other platforms required the designation of longitude and latitude columns for plotting locations. Adding the coordinates will also facilitate the use of the data for other visualization projects about mass grave locations. Google Sheets has several plugins available that derive the longitude and latitude coordinates from full addresses. I used both GeoCode by Awesome Table (https://chrome.google.com/webstore/detail/geocode-by-awesome-table/cnhboknahecjdnlkjnlodacdjelippfg?hl=en) and Geocode Cells by mlucool (https://chrome.google.com/webstore/detail/geocode-cells/pkocmaboheckpkcbnnlghnfccjjikmfc?hl=en) to compile the geocoordinates. I used both programs because they limit the number of sites you can locate within a 24-hour period to 500 entries. To bypass this limitation, I ran the two programs separately on the data. Once the mass grave data was geocoded, it was ready for upload as a layer onto the various digital platforms for testing.

their map do not correspond to their actual coordinates, but instead to the "populated area where they are located".[79] The SMJ does not provide an explanation as to why they use this methodology in their placement of the map pinpoints, but the exact locations for many of the graves are still unknown. Often, familial and affiliative relations identify a general area where the grave is thought to lie, but it can take many exploratory excavations to locate the actual site of the remains. Because of the nebulous recognition of the exact sites, it is nearly impossible to geographically designate the precise locations of many graves, therefore the points are approximations of the sites. The polemical search for Federico Garcia Lorca's gravesite exemplifies the difficulty in ascribing a precise location to gravesites. In 2015, the mayor of Vizcar in Granada installed a commemorative plaque designating the spot where his remains were believed the reside, but as of August 2018, entities are still speculating and attempting to locate the remains.[80]

Metadata Schema for Digital Media

Following Dublin Core metadata standards, I devised a schema for the underlying information relating to the digital media for use in the map.[81] I formatted the dataset of multimedia texts and devised categories for the different media types. Simply defined, metadata is data about data. The media included on the map is inherently inscribed by place, but it was also imperative to include the data (or metadata) about the data (or text). The metadata schema emerged from the texts included on the map, since these digital materials are to be studied, considered and analyzed, rather than consumed. The final spreadsheet has five categories and six .xls sheets total.[82]

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[79] Gobierno de España, "Map of Graves."

[80] Europa Press. "Memoria.- El Ayuntamiento de Víznar sitúa la fosa de García Lorca en el barranco y la señala con una placa." *20 minutos*, July 18, 2015, n.p., http://www.20minutos.es/noticia/2516794/0/memoria-ayuntamiento-viznar-situa-fosa-garcia-lorca-barranco-senala-con-placa/; Juan Miguel Baquero, "La fosa de Lorca: tres búsquedas y un último intento," *El Diario.es*, August 17, 2018, n.p., https://www.eldiario.es/andalucia/fosa-Lorca-busquedas-ultimo-intento_0_804569760.html.

[81] Dublin Core is a metadata standard meant to assist in the standardization of metadata fields attributed to various artifacts. The Dublin Core Metadata Initiative "is an open organization supporting innovation in metadata design and best practices across the metadata ecology." ("Dublin Core Metadata Initiative," "About," http://dublincore.org/about/). Standardization of metadata is important for the networking of resources and extensibility of information. There are numerous metadata standards, but Dublin Core focuses on networked resources.

[82] I include the following metadata fields: Title / Título; Date / Fecha; Creator / Creador; Source / Fuente; MediaType / Tipo de Medio; Gravesite / Fosa; Town / Municipalidad; City / Ciudad; State / Comunidad Autónoma; Country / País; Lat; Lon; SourceURL / URL; Description of Resource / Descripción del Recurso; EmbedURL (not shown in popup window). After evaluating the types of media accessible through the Internet, I devised the following categories: 1) Master sheet with all the data combined, 2) Articles / Artículos, 3) Audio, 4) Videos, 5) Novels / Novelas, 6) Social

I also had to decide what types of resources were feasible for inclusion on the map and how to geolocate vague locations. Since one of the goals of the project was to associate specific gravesites with media related to the recuperation of the site, I only included media that referenced a specific area, rather than the Peninsula in general. That means that I excluded general resources for the recuperation of historical memory. For example, the ARMH's website that documents the work of their group. I did not include a link to the ARMH website on the map. Since the ARMH serves the Peninsula at large, there was no way to spatially represent their website on a map. Instead, I went through the ARMH site and pulled videos and images of their recovery efforts for specific sites and mapped them accordingly. Similarly, Canal Sur's radio program, "La Memoria" has 365 radio programs dating from October 20, 2006 through December 21, 2017 about historical memory in Andalucía in general.[83] Since their program focuses specifically on Andalucía, I was able place a coordinate on the geographical coordinate for the autonomous community. But I also downloaded and parsed through the descriptions of their over 300 programs and embedded the audio for the twenty-eight specific shows in relation to the exhumation locations they discussed in the program.[84]

Networks / Redes Sociales 7) Websites / Sitios web. I started out with a broad set of categories and narrowed it down as the map developed. For example, I combined "Scholarly Articles" with "Newspaper Articles" to form the "Articles" layer. I also joined "Documentaries," "Films," and "Videos" into a "Films" category. I had originally differentiated layers for the different filmic representations where films and documentaries were defined as having the backing of a production company, journalism outlets, or other kinds of professional backing. Conversely, I defined "Videos" as being made directly by familial and affiliative relations and uploaded to the web of their own volition. The main reason I simplified the categories was to not overwhelm the user with too many layers on the map. Each category represents a different layer, making for six total layers—one layer for the mass grave data and five individual media layers. If I had included the broader set of categories, the map could have easily expanded to over ten layers

[83] Canal Sur, "La Memoria," accessed August 31, 2018. http://blogs.canalsur.es/lamemoria/listado-y-numeracion-de-todos-nuestros-programas/. Since the beginnings of 2018, the program has shifted to television, rather than of radio.

[84] One important consideration when developing the relevant categories for the media data schema was the language chosen for the metadata fields. I used both Spanish and English for the metadata fields. I included English for a couple of reasons. First, I wanted to open the project up to the largest audience possible. The inclusion of Spanish and English for the Dublin Core metadata fields would make it easier for a wide variety of users to understand the categories implemented to define the resources. While most resources included on the map are Spanish-language, the inclusion of the English translation of the various metadata fields would give the English user a clear description of the categories. Second, including the English translation facilitated the coordination on the development the project while working with a diverse group of scholars at the University of California, Los Angeles.

Development of Project Goals

      A number of different platforms were considered for the project: *Google* "Fusion Tables," *Google* "MyMaps," *Omeka* with *Neatline* functionality, ESRI "Story Map" in combination with ArcGIS, "StoryMapJS," "Carto," and "Leaflet." After considering the project needs, I created four working prototypes in four different platforms (Google "MyMaps", ESRI "Story Maps", "Carto" and "Leaflet").[85] Each platform prototyped had advantages and disadvantages, but none fit the criteria for the project without significant modifications to the main source code. [86] I wanted a to build a map that I could easily maintain on my own,

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[85] "Google Fusion Tables," Google, accessed August 30, 2018, https://fusiontables.google.com/; "Google MyMaps," Google, accessed August 30, 2018, https://www.google.com/mymaps; "ESRI Story Maps," ESRI, accessed August 30, 2018, https://storymaps.arcgis.com/en/; "Leaflet," August 2018, http://leafletjs.com/; "Neatline," Omeka, University of Virginia Library Scholar's Lab, accessed August 30, 2018, http://neatline.org/; "Carto," accessed August 30, 2018, https://carto.com/; "StoryMapJS," Northwestern University Knight Lab, https://storymap.knightlab.com/.

[86] The first prototype was built in *Google's* "MyMaps" (Figure 15). "MyMaps" was perfect for displaying resources in a non-linear fashion. It could also display video content, which was better than most of the mapping platforms available. "MyMaps" did have some significant downsides. The biggest drawback being that each data layer was limited to 2000 entries. With the mass grave dataset containing over 2,600 entries, I would have had to split the dataset into two separate layers. That separation would not serve any pedagogical purpose and would have been difficult to explain to users. Almost as egregious was the inability to display multiple elements for the same location. The map would stack resources located in the same space on top of one another, without clustering them in any way. The stacking would hide all the points underneath the topmost resource, making it impossible to click on or even see the points beneath. Finally, since there was no HTML editor available for the popup windows, I could not add multiple media elements in one info window. I could only include one element per popup.
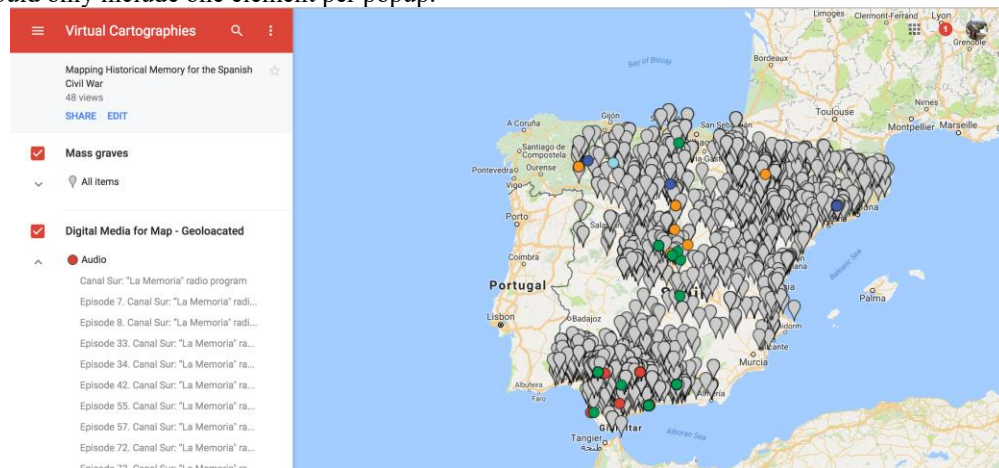

Figure 15: Prototype in Google "My Maps"

      I next considered ESRI "Story Maps" (Figure 16). ESRI is a well-established GIS company also responsible for GIS mainstay, ArcGIS. "Story Maps" offers multiple templates that could easily display the multimedia content that I wanted to incorporate, such as uploading films

hosted locally and embedding *Youtube* or *Vimeo* videos, as well as using Soundcloud for audio clips. But as the platform's name suggests, the available "Story Map" templates all have an intrinsic narrative structure, as it expects the users to tell a story with their content. They did have one template that displayed resources on a nonlinear map, but that template did not integrate multimedia content.
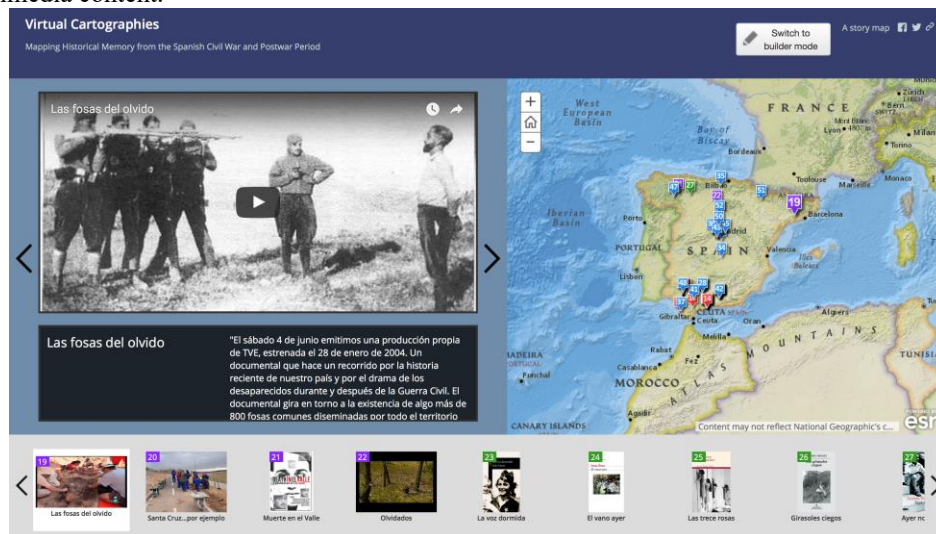

Figure 16: Prototype in ESRI "Story Maps"

I moved on to "Carto" (Figure 17Fig).[86] "Carto" is a sophisticated GIS platform and because of that, it overcame many of the problems I had with Google "MyMaps" and ESRI "Story Maps". Like uMap, it had clustering capabilities for designating multiple data points for the same location and displayed resources in a non-linear manner. It also had some added features unavailable in uMap. I could create a legend that was embedded in the map itself, rather than having a legend that only appears in the sidebar when a user clicks on "About." But "Carto" had no multimedia integration. Each data point could only include one representative image, no video, audio, or PDF content could be used. There was a possibility for the inclusion of video, with significant modification to the site's code. Since media integration was one of the cornerstones of the project, I had rejected the platform.
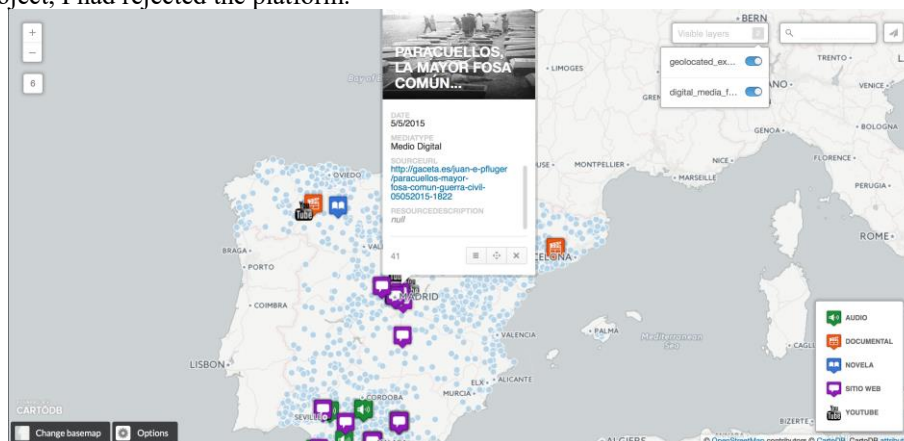

Figure 17: Prototype in "Carto"

without the assistance of programming experts. After experimenting with different platforms, I selected uMap as the platform for the project.[87] uMap is a free, open-source platform developed out of France where users create digital maps using OpenStreetMap layers that can be embedded into any website. uMap was the only program that could manage the three main objectives of the project.

Integrating Digital Resources

One of the greatest challenges of the project and a fundamental goal was the integration of digital media elements on the map. Most GIS platforms are not designed for the integration of media, but rather to conduct geospatial analysis. While many platforms can incorporate one representative image for each pinpoint, displaying multimedia elements proved to be extremely challenging for most out-of-the-box tools. After evaluating the distinct types of media for integration into the map, the following types emerged: audio files, videos (both *YouTube* & uploaded clips), pdfs, jpgs, and URLs. Initially I thought that most of the popular mapping platforms could handle the needs of the project, but incorporating a variety of media types, and also needing to include more than one media file per popup window was a challenge for nearly all of the typical mapping platforms. uMap could easily displays media on their platform through

From there, I moved on to mapping libraries, specifically "Leaflet" and Leaflet templates found in GitHub. (Figure 18). "Leaflet" does not have a Graphical User Interface (GUI). A GUI provides an interface with buttons used for the creation of digital products. A GUI expedites the construction of online content without having to know any programming languages. "Leaflet" provides different snippets of code you can combine to customize and build a digital map. "Leaflet" had a significantly higher learning curve and required significant programming knowledge. I converted the .csv data sheets into to GeoJson format in order to use it with the libraries and templates I was testing. I was able to connect the geojson file to the "Leaflet" JavaScript library and was able to display my data points, but I was unsuccessful at displaying any of the info window popups.
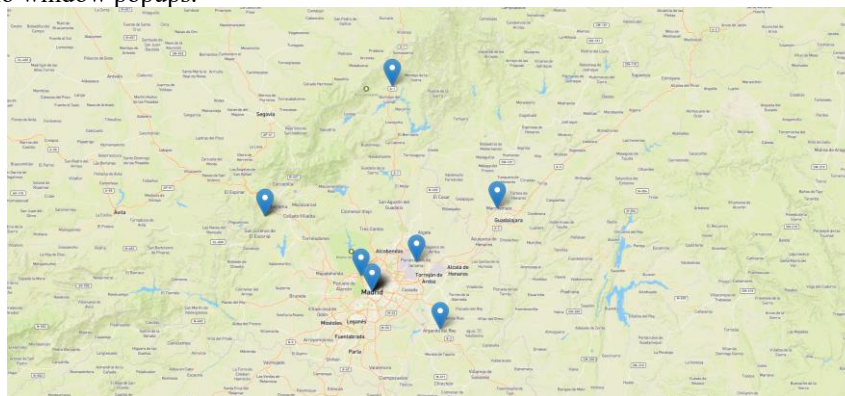

Figure 18: Prototype in "Leaflet"

[87] "Umap," accessed August 31, 2018, http://umap.openstreetmap.fr/en/.

the use of Iframes. That means users can embed a variety of media types into the information windows.[88]

In order to illustrate how the map works, we will review some concrete examples below. The mass graves in Valdenoceda previously discussed will serve as an exemplary model. In the Figure 20, we see the information window (or popup) for the grey dot, which represents the data from the Spanish Ministry of Justice and shows the metadata about the mass graves in Valdenoceda.
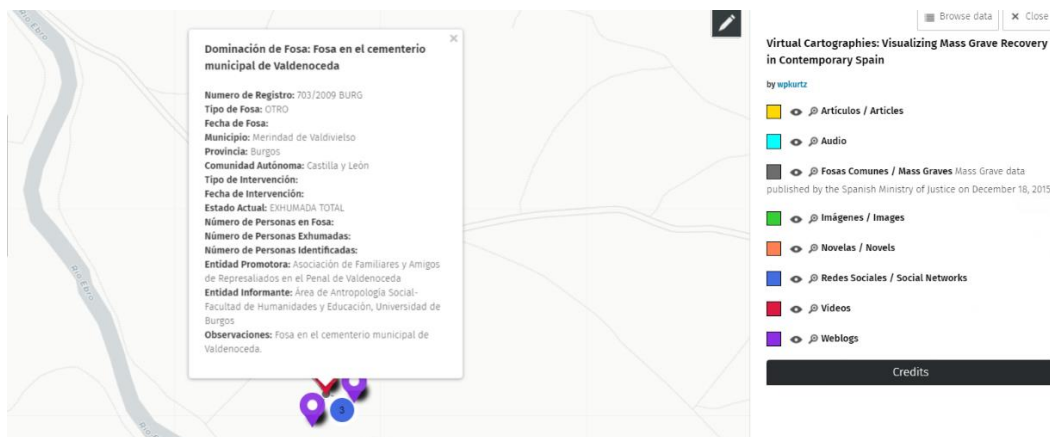

Figure 20: MSJ's Metadata in Popup Window

Clustered around the gravesite we see a collection of digital texts, as denoted by the multicolored drops, that focus on the mass grave location. By clicking on the red icon, a user can view a video from within the mapping platform of the 2015 commemorative event (Figure 21).[89]

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[88] I stored all of the media elements for project on Box.com. Because UCLA has an agreement with the cloud service provider, university-affiliated persons have unlimited storage space on the cloud service (with a limit of 15gb per file). Box.com (as well as other hosting services, such as Dropbox) generates embed codes to use in the Iframe info windows for the map. Each file has a unique code and I set the files to be available to anyone with the link, so that any user viewing the map would have access to the resource housed in Box.com. I hosted the representative images for the newspaper articles in Box, as well as all the audio files, PDFs and several videos. A user can see when a resource is being pulled from Box.com because the Box logo is visible in the popup window.

[89] Exhumación Valdenoceda. "Valdenoceda. 18 de abril de 2015. 11 familias recuperan a los suyos". *YouTube* video, Duration 02:51. Posted [April 19, 2015]. https://youtu.be/MfeVNdYUpuQ.
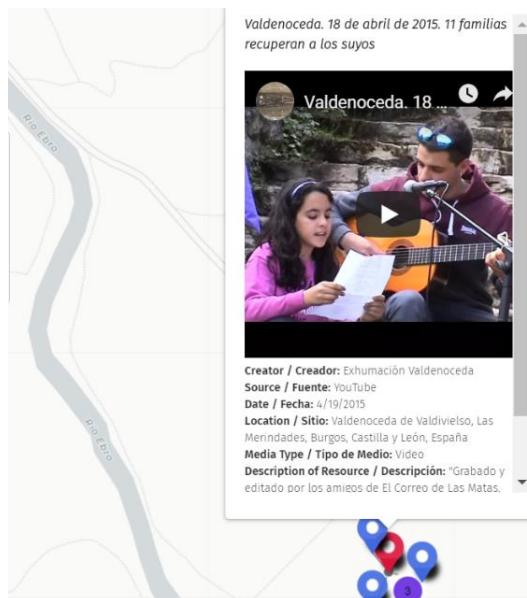
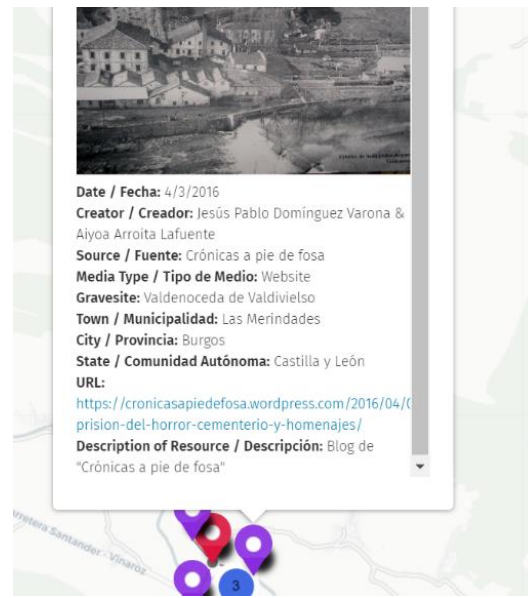**Figure 21: "Exhumación Valdenoceda"** *YouTube* **Video**

Figure 22: Weblog "Valdenoceda, prisión del horror, cementerio y homenaje"

The metadata shows that the video was created and uploaded by "Exhumación Valdenoceda," the channel managed by the association of families who rallied for the exhumation of the site and operate the weblog titled "Exhumación Valdenoceda: Buscamos familias. Cerramos heridas."

The three purple pinpoints represent three different weblogs about the location. Figure 22 shows a weblog written by husband and wife team Jesús Pablo Domínguez Varona and Aiyoa Lafuente who created the weblog "Crónicas a pie de fosa." Clicking on one of the three purple icons reveals a blog entry titled "Valdenoceda, prisión del horror, cementerio y homenaje" posted on their weblog on April 3, 2016.[90] By clicking on the link in the popup window, the map user is redirected to the blog post where the couple writes a detailed history about the prison, the mass graves that grew from the jail, the exhumations that occurred around the site, and a narrative about the annual commemorations.

Visible beneath the three purple points is a blue cluster with the number three in the center. The number three specifies that, if clicked, the cluster will reveal three map points with social media content. Figure 23 shows one of the points from the *Facebook* page of the association of families "Exhumación

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[90] Jesús Pablo Domínguez Varona and Aiyoa Arroita Lafuente, "Valdenoceda, prisión del horror, cementerio y homenaje," "Crónicas a Pie de Fosa," accessed 10 December 2018. https://cronicasapiedefosa.wordpress.com/2016/04/03/valdenoceda-prision-del-horror-cementerio-y-homenajes/.

Valdenoceda: Buscamos familias. Cerramos heridas".[91] Clicking the link in the metadata leads the user to the *Facebook* page run by the families where visitors can see videos, posts, and images about the efforts of the Association.
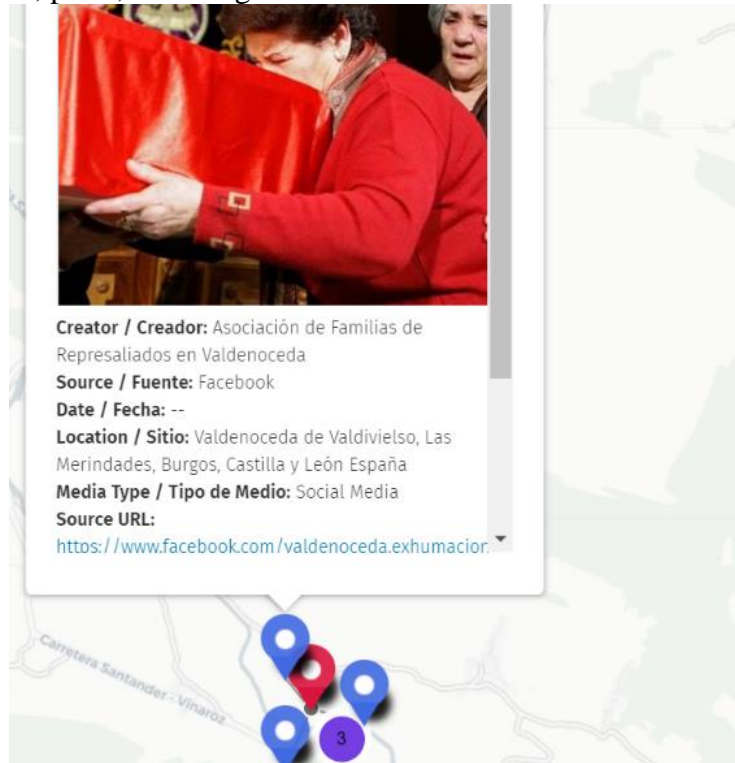

Figure 23: *Facebook* Page for the Association of Families "Exhumación Valdenoceda"

Figures 21-23 display only three of the seven digital texts about the mass graves at Valdenoceda. The other available materials include additional blog posts from other community weblogs and websites specific to the location, as well as access to *Facebook* groups run by family members, where users can interact with one another to share stories and information about the gravesite and their experiences there. This area in Burgos exemplifies how "Virtual Cartographies" provides a space for communities and scholars to approach place-based materials and visualize the interconnectedness of ritualistic practices and community recuperation efforts. The same thick mapping elements can be seen throughout the project. Map visitors will see not only the information about the grave as provided by the Ministry of Justice, but also learn about the history of the space, the exhumations, the rituals of reburial and the ongoing commemorations. Separating each of the media types into individual layers (i.e. one layer for audio, one for

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[91] Exhumación Valdenoceda. *Facebook*. https://www.facebook.com/valdenoceda.exhumacion/

videos, one for novels, etc.) created a legend in the "About section." The legend shows which pin color represents each layer. Users can toggle each of the layers on or off. The ability to control the different layers allows users to view different combinations of resources, if desired, rather than all the digital resources at one time.

Developing a Non-linear Structure of Content

When displaying the data layers onto the map, I sought to extricate the project from imposing an authorial presence in the presentation of materials and this consideration became one of the guiding principles of the project. Since the map was designed as a resource for scholars and the public, I did not want to impose a narrative structure on the digital texts by avoiding the addition of a linear narrative to the media elements. The objective was for the map to function as a platform to further bolster the efforts of the creators of the media elements and to situate these digital texts within the larger framework of recuperation. Presner and Shepard explain why a thick map is an ideal tool for the interaction of a user with digital cultural materials: it "privileges experiential navigation on the part of the user giving them the ability to control their interaction with the multimedia elements on the map".[92] Rather than guiding the user through the digital resources as inscribed by place, "Virtual Cartographies" was designed to provide an open framework through which to allow users to navigate and explore sites of memory as represented through digital cultural texts. While the media selection process and implied geographic structure inherently gives the creator of projects such as "Virtual Cartographies" an authorial presence, I wanted to remove my voice as much as possible, while presenting the resources in a clear, straightforward manner. The structure of the information for each resource is alphabetical: layers are organized by title (audio, films, novels, websites, etc.) and the media within each layer is organized alphabetically by title as well.[93]

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[92] Presner and Shepard, *Mapping*, 207.

[93] Similarly, the mass grave dataset organizes the name of the gravesites alphabetically within its own layer. When navigating the map, a user could click on the color pinpoints directly on the map, or by using the sidebar that organizes content in alphabetical order. There are six separate layers listed alphabetically, each identified with different color pinpoints. In the sidebar of the map located on the right, under "About," you can view a list of the different layers and their corresponding pinpoint colors.

To view the data within each layer, click on "Browse data" in the sidebar (or at the bottom of the map). The resources can be navigated by clicking on the different color pinpoints located directly on the map, or by scrolling through the "Browse data" tab in the sidebar. The layers can be toggled on and off by clicking on the "eye" icon. You can view any combination of layers by turning them on and off. The "eye" icon can be found under the "About" or "Browse data" tab in the sidebar, or the "Data layers" control icon on the left side of the screen. Users can also filter the titles within all of the layers using keywords in the "Browse data" tab. Filters group together elements that contain the same keywords, while filtering out content that does not.

Clustering of Multiple Elements for One Location

The last goal was to represent multiple media elements for any one site. Certain gravesites have many digital texts associated with them. A site could have a documentary produced about it, a *YouTube* video filmed by a family member, and a radio program discussing the exhumation. I wanted to display multiple media points (and their metadata) for one gravesite. I considered combining all the multimedia elements for one site into one point, to share one information popup window, but ultimately kept them as separate points to be viewed as a cluster.[94] "Virtual Cartographies" found a platform that met all the project goals in uMap, but only after extensive experimentation with some of the most popular digital mapping software.

Conclusions

The victims from the mass graves that are the subject of this essay form part of the cultural collective memory for familial and affiliative relations who have sought their recovery for decades. As such, the searching, disinterment processes and the rituals of reburial that revolve around them assist in the recovery from the collective trauma fomented during the dictatorship. The digital media documenting rituals of reburial and commemoration foster physical and virtual communities while showing the cyclical nature of the exhumation process, culminating in the return of the remains to these communities. Rituals of reburial and commemorations honoring those who laid hidden for decades in their burial sites morph into physical sites of remembrance that are a living space for the recuperation of collective memory. By highlighting the polyphonic voice of the rituals of remembrance on a digital cartographic interface, "thick" maps like "Virtual Cartographies" help disseminate place-based digital cultural texts in an attempt to situate these processes in a historical, social, and spatial framework.

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[94] Combining all the media elements into one popup window would overwhelm the user with too much information on the screen at one time. It was also impossible to devise a coherent way to incorporate the metadata for multiple media elements, if included within one popup window. Keeping the media points separate serves the purpose of immediately signaling what type of media (audio, images, video) is associated with each site. uMap provides the option to cluster together points located in proximity to each other. A circle with a number in the center represents a cluster. The number in the center of the circle indicates the number of elements clustered together. As users zoom in, the clusters disperse and show the individual pinpoints. Clustering functionality permits media elements to retain autonomy while displaying a relation to other surrounding resources. I maintained the system's default clustering radius at 80, meaning that the maximum radius that a cluster will cover from the central marker is 80 pixels. Decreasing the radius will make more, smaller clusters.