

Chapter 58

Extending Metadata Standards for Historical GIS Research: A Case Study of the Holocaust in Budapest and the Armenian Genocide in Turkey

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ABSTRACT

This chapter proposes a structure for handling commonly observed uncertainties in geo-historical data, using as case studies two historical geographical information systems (HGIS) projects that interweave historical research with the geography of genocide. The first case involves the ghettoization of Budapest's Jews during the Holocaust in the second half of 1944. The more recent work, and the second case, covers the Armenian genocide spanning most of WWI and several years afterwards. The authors suggest using existing metadata standards as one way of handling the inherent uncertainties of geo-historical sources. While not a definitive solution, they argue that such an approach provides a starting point and a platform to conceptually frame the use of geo-historical data in HGIS.

1. INTRODUCTION

Historical research relies on source materials, gathered from archives, collections, and museums, that are frequently scattered, incomplete, and inconsistent (Gregory & Healey, 2007). Geographers seek out, map, and analyze historical sources from a spatial perspective (Goodchild & Janelle, 2010), building geo-historical datasets designed around the absolute or relative locational attributes of historical information, such as geographical coordinates and addresses. In HGIS (Gregory & Ell, 2007; Hillier & Knowles, 2008; Knowles, 2000), spatial data provide the framework for quantitative analysis, while the qualitative nature of historical data offers researchers an abundance of information, such as names and birthdates, that may reveal a narrative behind quantitative reasoning. Thus, HGIS combines historical

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research with the ability to map, analyze, and visualize past events. When we combine qualitative and quantitative methods in a mixed methods analytical framework (Creswell, 2009; Creswell & Plano Clark, 2011), as is often the case in HGIS and qualitative GIS (Cope & Elwood, 2009; Madden & Ross, 2009), we walk away with a more vivid view of history.

The process of researching, gathering, organizing, designing and building a HGIS presents challenges unique to each venture. Yet, common traits are identifiable. One such trait concerns the degree to which individual pieces of information can be verified: because the reality in which the data were created no longer exists, validating and correcting such information is very difficult, if not impossible. It is therefore critical to keep detailed records of any changes, whether additions, omissions or interpretations, made to the original source materials during the construction of the HGIS. Assessing the accuracy and reliability of the data used to create the HGIS poses another critical consideration, because without such assessment the true value of HGIS representations or analytical results is impossible to ascertain (Heuvelink & Burrough, 2002).

In this chapter, we explore how to take advantage of multidisciplinary metadata solutions to record and communicate weaknesses present in geo-historical datasets. Using two case studies on the geography of genocide, we discuss how to record uncertainties associated with the construction of the HGIS and how to preserve geo-historical information to make it available to future researchers. The case studies chosen exemplify the difficulties and challenges associated with building HGIS applications using historical sources. Our research interests have led us to focus on past examples of genocide, but the framework we present can be employed in other HGIS projects, independently of the historical period or series of events studied.

2. TWO CASES OF GENOCIDE

The 1948 United Nations *Convention on the Prevention and Punishment of the Crime of Genocide* (Kunz, 1949; United Nations, 1948) defines genocide as the intentional attempt to destroy another group, either in whole or in part. “Groups” are defined in national, ethnical, racial, and religious terms, to the exclusion of the political and social dimensions. The U.N. (1948) also limits the means of intent to killing, serious mental or bodily injury, inflicting unlivable conditions, preventing births or forcing sterilization, and, finally, removing children from the group and placing them in another group. Several extensions and refinement of the 1948 definition have been proposed (Chalk, 1989; Derderian, 2005; Huttenback, 2002; Jørgensen, 2001; Miller, 2003; Schabas, 1999; Staub, 1989), but for our purpose of this article the U.N definition suffices.

Our two case studies include examples of racial genocide as seen in Budapest during WWII and ethnical genocide as seen in Turkey during and after WWI. The Hungarian chapter of the Holocaust started with the German occupation in March 1944. Before that date, the Hungarian government, an ally of the Nazi regime, resisted the mass deportation of its Jewish citizens. After the occupation, mass concentrations and deportations occurred quickly in the countryside—over four hundred thousand Jews were deported between the 15th of May and the 8th of July (Braham, 2000)—but the systematic ghettoization of nearly 250,000 Jews in the Hungarian capital did not begin until June 1944 (Braham, 2000). Ghettoization ended in Budapest in January 1945 with the arrival of Soviet forces and the liberation of the city. World War I provides the backdrop for the Armenian genocide from 1914 to 1923. During this period, Turkey struggled with the collapse of the Ottoman Empire, the rise of Turkish nationalism, and a fear of partition, in addition to minority ethnic groups calling for expanded rights and freedoms

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