80. MAPPING THE GEOGRAPHIES OF POWER: A SPATIAL PATTERN ANALYSIS OF LANDOWNERSHIP DYNAMICS IN AOSTA (1730– 1898) THROUGH HISTORICAL GIS

Barbara Drusi 1 Beatrice D'Agostino 1 and Samuele De Petris 1

1 University of Turin, Department of Agriculture, Forest and Food Sciences, L.go Braccini 2, Grugliasco ,10095, Italy

Within the Historic Urban Landscape (HUL)framework, cities can be interpreted as dynamic palimpsests in which successive social, institutional, economic, and environmental processes remain embedded within the urban fabric. This study examines Aosta old town (north-western Italy) to investigate relationships between power structures, land-use patterns, and urban morphology between the eighteenth and nineteenth centuries. The research develops a Historical GIS (HGIS) integrating heterogeneous cadastral, cartographic, archival, and toponymic evidence within a harmonised spatial framework. The reconstruction draws principally on eighteenth- and nineteenth-century cadastral sources; where cartographic evidence is incomplete, historical toponymy, ownership relationships, parcel dimensions, and later cadastral geometry support the spatial reconstruction. Local entropy was mapped for quantifying spatial heterogeneity in social-group ownership and land use, while multivariate clustering was adopted for exploring recurrent socio-functional configurations. Finally, a diachronic comparison was performed for assessing transformations between the late Ancien Régime and the late nineteenth century. Results reveal persistent geographies of power associated with ecclesiastical precincts, aristocratic properties, productive corridors, and agricultural enclaves, alongside differentiated patterns of socio-functional heterogeneity. The persistence of gardens, orchards, agricultural outbuildings, and mixed residential-productive properties further reveals the enduring interweaving of agricultural and urban functions, demonstrating the potential of HGIS for quantitatively interpreting historical urban landscape transformations.