

## English Summary

This dissertation is about collective action issues in common property resources. Its focus is the “threshold hypothesis,” which posits the existence of a threshold in group size that drives the process of institutional change. This hypothesis is tested using a six-century dataset concerning the management of the commons by hundreds of communities in the Italian Alps. The analysis seeks to determine the group size threshold and the institutional changes that occur when groups cross this threshold.

The dissertation consists of four parts. The first part consists of three chapters: Chapter 1 outlines the research effort; Chapter 2 describes the case study; Chapter 3 discusses the data sources that were accessed in the research. The second part consists of an investigation of the existence of a group size threshold, spanning Chapters 4–6. Chapter 4 contains a discussion of theories cited in the literature about group size, thresholds in collective action, fission–fusion strategies, institutions for property rights on the commons, and institutional change and sets the background for the formulation of the threshold hypothesis of institutional change. Chapter 5 contains a discussion of the identification of the group size threshold and of its determinants. Finally, Chapter 6 is a discussion of the role and rationale for fission–fusion strategies. The third part includes Chapters 7 and 8 and encompasses a discussion of the internal functioning of formal institutions beyond the threshold with a particular focus placed on the determinants of institutional design. Chapter 7 contains a discussion of literature related to group heterogeneity and institutions, with a particular focus on the study of resource management and collective action. Chapter 8 is dedicated to the role of social and resource heterogeneity and group size in forging institutions. Chapter 9 offers a synthesis of the findings as well as a discussion of the implications and potential further studies.

There are five main findings. First, the number of individuals in villages remained stable for six centuries, despite the population in the region tripling in the same period. Second, the longitudinal analysis of face-to-face assemblies and community size led to the empirical identification of a threshold size that triggered the transition from informal to more formal regimes to manage common property resources. Third, when groups increased in size, gradual organizational changes took place: large groups split into independent subgroups or structured interactions into multiple layers while maintaining a single formal organization. Fourth, resource heterogeneity seemed to have had no significant impact on various institutional characteristics. Fifth, social heterogeneity showed statistically significant impacts, especially on institutional complexity, consensus, and the relative importance of governance rules versus resource management rules. Overall, the empirical evidence from this research supports the “threshold hypothesis.” These findings shed light on the rationale of institutional change in common property regimes, and clarify the mechanisms of collective action in traditional societies. Further research may generalize these conclusions to other domains of collective action and to present-day applications.