

## The Erice Decalogue

The objective of the scientific research presented and discussed at the International Workshop on *Mathematics and Democracy: Voting Systems and Collective Choice* is the development and understanding of fair electoral systems. Pursued by scientists coming from different disciplines – mathematics, political science, economics, the law, computer science, . . . – there is a common set of principles that the participants share.

We believe that a fair electoral system for electing a Parliament should:

1. Ensure transparency and simplicity. Voting systems whose properties are simple to understand by the electorate should be preferred to complex ones, and they should respect a nation's historical and legal context.
2. Guarantee accuracy. The act of voting – with paper ballots, optical scanners, electronic or other devices – should be able to assure to voters that their votes were accurately counted.
3. Promote competitiveness and avoid partisan bias. The system should favor no political group over another. In particular, it should render (almost) impossible the election of a majority in the Parliament with a minority of the voters.
4. Make every vote count. A system should never discourage a citizen from voting; it must encourage participation.
5. Make the Parliament a “mirror” of the electorate representing the divergent “popular wills,” yet capable of governing (through, for example, the emergence of a majority).
6. Minimize the incentives to vote strategically. The system should encourage voters to express sincerely their true preferences.
7. Eliminate partisan political control by assigning the legal and administrative responsibility for elections to an independent commission.

A system using electoral districts should:

8. Encourage geographical compactness of the districts and respect natural geographical features and barriers.
9. Respect existing political subdivisions and communities of interest, and make every effort to avoid confusion among districts defined for different elections (local, regional and national).
10. Guarantee redistricting on a regular basis to account for demographic changes (but never in response to partisan appetites); at same time, it should recognize the limited precision and transitory nature of census data.

Theory is necessary to understand the properties and consequences of choosing one or another electoral system. A “science” of electoral systems is emerging and should be used in designing new systems or reforming old ones. Regrettably, history demonstrates that elected officials have repeatedly manipulated systems for partisan advantage . . . and have resisted the “intrusions”

of scientific approaches to the design of electoral systems. Few voters realize the extent to which manipulation has profoundly effected electoral outcomes, sometimes transforming the votes of a minority into a majority in Parliament.

All too often the players of a nation’s political game – its elected officials – are, at one and the same time, the referees of the game, and they change the rules to accommodate new situations. Imagine the public outcry were the game to be football! This is why independent commissions are needed, together with professionals trained in the emerging multi-disciplinary science of electoral systems, responsible for keeping abreast of all the new theoretical and technological developments in voting.

Erice, 23 September 2005

**Editors’ note:** The present declaration, now known under the name of “The Erice Decalogue”, has been unanimously signed by all the participants in the Erice Workshop. It has been written by Professor Michel Balinski with contributions by several invited speakers and the editorial assistance of Dr. Isabella Lari.

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