# Teaching Party Systems: A Culinary Demonstration 

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#### Abstract

Duverger's Law-the principle that first-past-the-post systems tend to promote two major political parties while proportional representation systems tend to promote multipartism-is a commonly taught topic in introductory and some upper-level political science courses across subfields. However, it also contains concepts that are difficult for undergraduate students to grasp, particularly those who are unfamiliar with other electoral systems. In partial response to these concerns, this article introduces a memorable in-class demonstration that utilizes food items to illustrate the logic behind Duverger's Law. The demonstration serves as a flexible blend between lecture-oriented and active learning techniques, and can be adapted to teach other topics-such as directional and proximity models of voting, the Median Voter Theorem, and other topics in rational choice theory. Preliminary evidence presented suggests that students enjoy the demonstration, remember the concepts, and perform better on assessments related to the topic. The article concludes by challenging political science educators to develop and share more demon-stration-type activities, which are commonly used in STEM and other fields.


## ARTICLE HISTORY

Received 2 October 2017
Accepted 22 March 2018

## KEYWORDS

Political parties; Duverger's law; demonstration; undergraduate education

## Introduction

"Democracy is unthinkable save in terms of parties" claimed political scientist E. E. Schattschneider (1942, 1). Fitting for this statement, a unit on political parties is nearly ubiquitous in introductory political science courses, especially within the American and comparative politics subfields. And within those units, a popular topic of choice is Duverger's Law: an explanation for why first-past-the-post electoral systems like that of the United States (U.S.) produce two major political parties while proportional representation (PR) systems favor multipartism (Duverger 1954). Indeed, "among students of electoral systems, there is no better-known, more investigated, nor widely cited proposition than ... Duverger's Law" (Benoit 2006, 69). Although the topic is widely taught and of interest to many undergraduate students, it is often a difficult concept for students to grasp, particularly if they do not have personal experience with different electoral systems (e.g., Endersby and Shaw 2009; Smith 2012). This article describes a memorable interactive demonstration of Duverger's Law that can be utilized in a variety of course contexts, that is well-received by students, and that is effective in its learning
outcomes. Given the many applications of this teaching method to political science concepts, discussed in the concluding section of this article, I propose that this case also demonstrates the general utility of physical demonstrations in the political science classroom to teach difficult theories and models of politics.

## Duverger's law: The standard teaching method and active learning extensions

French scholar Maurice Duverger, writing in the 1950s, infamously claimed that electoral systems that hold elections won through plurality or majority votes (commonly known as first-past-the-post or winner-take-all systems) tend to have two major political parties while PR systems tend to have multiple political parties. He offered two primary reasons for this conjecture: the "mechanical effect" of electoral laws and the "psychological effect" of "wasting" one's vote on a party with little chance of winning (Duverger 1954; see also Aldrich and Grynaviski 2010). In regards to the mechanical effect: a "winner take all" system (where members of the legislature are elected by majority or plurality vote and typically to represent single-member districts) requires successful parties to have a broad base of support. Parties and voters alike have an incentive to form broad coalitions to prevent opposing parties from taking control of the government. To avoid this ideologically unsatisfactory outcome, powerful parties form to represent around half of the population each. These parties seek to avert splits in their coalition by issue-centered third parties, and, towards the psychological effect, ideological voters largely shun small third parties in support of established parties with a greater chance of winning the election (the "lesser of two evils"). This contrasts with PR systems, where seats in the legislature are apportioned to all parties (above a certain threshold) based on the percentage of the vote received in the election. Because a party can gain representation without a majority or plurality base of support, voters may have more incentive to vote for minor parties that are closer to their ideological persuasion.

A standard presentation of Duverger's Law involves a real or imagined competition among several parties. For example, students may be asked to imagine three parties: one on the political left that has support from $40 \%$ of the population, and two on the political right that have support from 35 and $10 \%$ of the population, respectively. Should the two conservative parties join forces, they would have enough support to defeat the liberal party candidate. However, if voters vote their true preferences in a winner-take-all system, the liberal candidate will win and both conservative candidates will be left out of the government. In a PR system, however, the conservative parties would win approximately 35 and $10 \%$ of the seats in the legislature, thus outnumbering the $40 \%$ of the seats allocated to the leftist party. Moreover, in the first-past-the-post system, the party with $10 \%$ support will likely fade away as those supporters move to the more popular conservative party to defeat the liberal party. But that same party in the PR system can gain real representation in the legislature and have the ability to form a government with their conservative allies.

This case, whether presented in hypothetical terms or using real parties from the U.S. and Germany, for example, can be useful to certain students. However, many students report finding these concepts confusing, difficult to grasp, or unrelatable, particularly if
they are first learning about the system of government they grew up under, let alone a foreign government system. This has led some to develop games and simulations to make the concepts more tangible and interesting (e.g., Endersby and Shaw 2009; Smith 2012; Switky 2004). Games and simulations have been utilized in political science for many years, particularly in subfields like International Relations, but their use has expanded in recent years as a growing body of research demonstrates their effectiveness as an educational tool (e.g., Asal 2005; Asal and Blake 2006; Hertel and Millis 2002; Randel et al. 1992; Wedig 2010). Essentially, games and simulations attempt to partially replicate a real-world scenario or skill to teach a broader lesson. As Asal and Blake (2006) note, these types of active learning exercises "often [help] to increase students' understanding of the subtleties of theories or concepts and draw in students who can be alienated by traditional teaching approaches." As such, complex theories like Duverger's Law offer a fertile ground for the use of games, simulations, or demonstrations.

Despite the potential for abundant varieties of simulations involving Duverger's Law though, as of yet the number available is relatively small. Two published examples of these simulations briefly highlight how the abstract theories can be translated into practical applications. Endersby and Shaw's (2009) simulation involves assigning students an ideal point (political preference) and providing them with polling information before a sequence of class votes. Each "election" includes different numbers of candidates in the race. After each vote, students then calculate the difference between their preferred ideological position and that of the winning candidate, but no additional information (beyond vote totals) is provided between elections. Throughout their active participation in the elections process, students are able to begin identifying principles of strategic voting when they see certain types of candidates winning. Smith's (2012) activity likewise relies on student voting, but allows the students to organize between votes, thus presenting a scenario where the logic of strategic voting is acquired through discussion with their classmates. This activity also includes a specific analysis of why third parties may persist in the face of electoral defeat. Both include debriefing periods where the logic of voter behavior and party dynamics are discussed following the students' experiences.

While these learning exercises offer many benefits (and indeed can be effective methods for relaying difficult information about party systems), they are frequently geared predominantly toward small classes and may be more time-consuming than is feasible for survey-type courses. Furthermore, these types of activities can require a non-negligible amount of intellectual or practical preparation on behalf of the instructor and the students. Additionally, these activities rely on students to naturally transition to thinking about voting in a strategic manner, which may take longer for some students than others. Partially in response to these drawbacks, I developed a demonstration of Duverger's Law that can be used in a variety of classroom environments and with minimal additional class time beyond a normal explanation of the concept. I now turn to a discussion of this demonstration.

## The demonstration

This demonstration of Duverger's Law requires the instructor to bring four foods to class, preferably those which are not common allergens for students. The foods should
represent the instructor's least favorite food, a nondescript but "acceptable" food, and two contrasting favorite foods. In different iterations of this demonstration I have used beets or radishes as my least favorite food, bananas or grapes as the nondescript food, and cookies and hot sauce as the favorite foods, among others. If the class size allows, I typically bring enough of one of my favorite foods (the cookies) to share.

Students are asked to imagine that there are three parties in the U.S.-the beet party, the banana party, and the cookie party, for example-and they are competing to make it on to the professor's plate. I explain to students that I, above all, do not want to eat the beet, and go to great lengths to make this point clear, utilizing humor liberally. For students, this is among the most memorable components of the demonstration, which serves a pedagogical purpose: appropriate self-disclosure on behalf of the instructor has been shown to have a variety of benefits for student learning outcomes-including improved motivation, taking a more active role in the class, and higher ratings of instructor clarity (for a discussion, see Cayanus 2004). I then explain to students that I eat bananas because they are healthy, but would not go out of my way to fill a plate with bananas. Finally, I describe my true preference for a plate full of cookies.

Utilizing the same numbers outlined above and offered in standard examples ( $40 \%$ beets, $35 \%$ bananas, and $10 \%$ cookies), I then offer students a tangible example of why third parties are crowded out in a winner-take-all system: if these numbers hold, I would be forced to eat the undesirable beet. Although my true preference is "the cookie party," I would settle for the banana in order to avoid eating a beet. This is one reason why a first-past-the-post system tends to support two major parties: because (rational) voters will often favor an acceptable second-choice party rather than live under the governance of their least desirable option. Especially in a polarized era, where most could not imagine belonging to another political party or compromising their beliefs, this demonstration provides a memorable example of the logic behind Duverger's Law.

In spite of this logic, however, most students will recognize that the U.S. nonetheless has more than two major political parties. How does Duverger's Law account for this? After the initial point about party systems is clear, I then introduce the hot sauce. I suggest that, should the hot sauce join with the cookies, both of my favorite food groups would be represented in the party (and, as a result, most closely align with my food ideology). In this instance, I may choose to vote for the third party even if it means that the beet would defeat the banana because I am able to fully express my food preferences. However, hot sauce and cookies are not a typical combination that most voters seek out, just as third parties represent an ideological choice that may be considered outside of the mainstream. As such, the hot sauce and cookie combination party is likely to draw only limited support, as those who previously supported the cookies are likely to transition support to the more mainstream banana. Thus, this added part of the extended metaphor demonstrates that Duverger's Law allows for other parties to form, particularly as they combine different issue alignments, but that these parties are unlikely to overtake one of the two major parties due to their perceived unacceptability to large swaths of the public.

Of course, the food items should also be utilized to demonstrate the logic of parties in a PR system. Utilizing all four of the foods (the beet, banana, cookies, and hot sauce),

I assign vote percentages to all four parties: $15,30,40$, and $15 \%$, respectively. In the PR system, these are the percentage of seats that will be held by those parties in the legislature. Because no party has an absolute majority, the food groups must then form a coalition government. The logical choice would be to combine the cookies (40\%) and one of the closest ideological partners (the banana or hot sauce parties), although they could technically form a government with the beet party as well, or be excluded altogether. For students who have little or no familiarity with PR systems (as is the case of many students in the U.S.), this offers a very basic introduction to what can seem like a confusing system of government. At the conclusion of the demonstration, I generally share the extra cookies with students, reminding them about the importance of preferences for and against certain parties in both types of electoral systems.

## Evidence and advantages

I have utilized a version of this demonstration in both introductory political science courses and an upper-level course on political campaigns at a private research university and a small liberal arts college. Sizes of these classes have varied. As an initial preliminary test of the effectiveness of the demonstration, I asked for anonymous, informal feedback from students in one semester's introductory American politics course. At the beginning of the class following the demonstration, students were given a survey reaction to gauge the degree to which they thought the survey impacted their learning, engagement in class, and whether they would retain the knowledge from the previous class. Of course, this evidence is based on the reaction and output of students, and should thus be interpreted with caution. As others have noted (e.g., Smith 2012), though, an experimental design and multiyear evidence is not always possible in the context of these teaching methods; although less conclusive, the evidence presented here is nevertheless relatively compelling in favor of the demonstration's utility.

Of the 44 students who completed the survey, 38 (about $86 \%$ ) responded "agree" or "strongly agree" on a 5-point Likert scale to the prompt that the demonstration helped them understand political parties in the U.S. Thirty-seven students (or about 84\%) agreed/strongly agreed that the demonstration helped them understand parties in the U.S. better than the two assigned textbooks that cover the topic (and were to be read prior to the class demonstration). Only one student disagreed with the item about their understanding of the concept, and two students disagreed with the item comparing the demonstration to the textbook. Moreover, 40 students (about 91\%) agreed or strongly agreed that the demonstration would be more memorable than the standard lecture on political parties (which was delivered prior to the demonstration), and 38 ( $86 \%$ ) agreed or strongly agreed that they enjoyed the food demonstration more than a standard class session.

The qualitative comments from the survey provide further evidence of the utility of the lecture for the students. Comments suggested that it was helpful to have a visual representation of the concept, that it "made more since [sic]," was "a good way to engage the class," and was especially useful for students who may have needed more clarification. Several commented that it would be more memorable for them and that they "enjoyed it," and one student helpfully pointed out that it was a good combination
with the standard lecture on Duverger's Law that was delivered prior to the demonstration. Two students suggested that they would have preferred a food other than cookies that I brought to share with the class. (Of course, instructors may adapt this using other foods if they desire.) Moreover, on the teaching evaluations for the course that semester, one student commented: "I learned that professors should use physical examples more to explain certain topics because it gets everyone engaged and learning."

The survey and the comments highlight many of the advantages of the demonstration: it is memorable, offers a concrete visualization of the logic behind Duverger's Law, and is more interactive than a typical lecture. Anecdotally, this often leads to better learning outcomes on assessments and greater enthusiasm among students in the class. In addition to the student perspective, the demonstration also offers advantages to the instructor. For one, the demonstration can be done relatively quickly (about $10-20 \mathrm{~min}$ total) while still making the point that more complex and longer active learning activities attempt to communicate. Although in many instances it can be advantageous to share classroom power with students, such as through active learning exercises, the demonstration also allows the instructor to maintain control and direction of the class session if desired. This can be useful with limited classroom facetime in survey courses or online courses, and may be a good exercise for instructors who want to make their courses interactive but are hesitant to try more in-depth active learning activities. Furthermore, it requires limited preparation outside of class (beyond obtaining the food items) and operates as an easy example for instructors who, like students, may not be familiar enough with the parties in another PR system to give a real-life example. ${ }^{1}$

## Additional applications

As discussed above, this demonstration can be used in a variety of educational contexts: in large and small classes; introductory and upper-level courses; and in multiple political science subfields. When I utilized this demonstration in a political campaigns course, for example, I also used the food items to illustrate the debate between directional and proximity models of voting by bringing in the additional dimension of issue saliency: topics which can be equally or more difficult to understand than Duverger's Law. (For a critical overview of these theories of voting, see, for example, Lewis and King 2000.) This demonstration could be adapted accordingly to cover multiple theories of voting, such as the Median Voter Theorem, Arrow's Impossibility Theorem, or a number of other basic concepts derived from rational choice theory, including evaluations of these concepts' logic and validity.

In addition to other substantive applications, the demonstration outlined here can be combined with a variety of additional classroom activities. It can be more or less interactive, asking students' intuitions about the logic behind vote choices, and could be followed up by a reflection that asks students to work through the logic with their own food choices or real-life political parties. I often conclude the demonstration with a discussion about the effect of party systems on the quality of democracy, which tends to be more fruitful once students are exposed to some of the reasons why two or more parties arise. The activity could also be bolstered by additional lecture units on the
history of parties in the U.S. or other countries, how parties exist to solve collective action problems, and how parties change and adapt over time.

Instructors with sufficient time who desire more active engagement on the part of the students may also choose to have them get involved in the demonstration and vote for their preferred food options. ${ }^{2}$ Instead of (or in addition to) offering hypotheticals about the banana party and cookie party splitting the vote, one may actually split students' votes by bringing in various types of cookies: chocolate chip, molasses, sugar, etc. The instructor may inform students that a certain percent of the population supports the beet party, but a number of cookie parties are running against it. Having students write their vote privately on a slip of paper may thus lead to fractionalization of the cookie bloc and a least preferred outcome of a win by the pro-beet forces. Moreover, multiple iterations of the voting process, as done by Endersby and Shaw (2009) and Smith (2012), and adding a time for partisan campaigning may help introduce the concept of strategic voting. This offers a compelling way to have students experience the effect of party systems, and could be adapted to teach a wide variety of concepts in rational choice theory.

The concept of Duverger's Law, although it is often limited to units on political parties or electoral rules, is in many ways a foundational idea for undergraduate students. It can serve as an introduction to the comparative method, the idea of strategic political behavior (or the lack thereof), and the fact that structural political forces influence voter turnout, political polarization, and the quality of democracy in a given state. At the same time, these can be difficult concepts for learners to grasp, especially for political science novices.

This article outlines one potential method for introducing the topic of Duverger's Law in a simple, novel, and memorable way that is also flexible to be adapted to the needs of the course and the instructor. In a pedagogical environment that often seems to be falsely divided between those who support and utilize active learning techniques and those who support and utilize lecture (e.g., Bain 2004), this technique also offers a blended approach between student-directed learning and a standard lecture. Given this, the technique draws from the advantages (and, indeed, some of the disadvantages) of each teaching style. The preliminary evidence above suggests that the demonstration of Duverger's Law is effective and useful in its own right, but also offers a challenge to political science educators to develop and share more demonstration-type activities, which are popular and widely used by colleagues in STEM and other fields. These may fit into existing models of simulations and games in the classroom, but can also be designed to be flexible enough to add interest and student engagement to a lecture-oriented course, as described in this case.

## Notes

1. For instance, an instructor who is trained in American politics may not have sufficient familiarity with the many parties in the German Bundestag to feel confident in using it as an example in class.
2. I thank an anonymous reviewer for this excellent suggestion.

## Notes on contributor

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