# Change the Rules, Change the Game

## Electoral Systems and Social Crisis

*Institute H2I*
*2021*

# The Story of the Hockey Warriors

Stu Grimson was one of the most feared players in the American Hockey League. But not because of his dexterity and hockey skills. He played on the fourth line and didn't get involved much in games. The fact that he averaged only 6 minutes per game (with the usual time being between 20 and 30 minutes) and scored only 5 points in 72 games was not important. That's not the reason why Grimson wasn´t on the ice. Yet his role was perceived as necessary. Stu was a brawler. He was on the ice to protect his more skilled teammates. When trouble was brewing, he was the one who "resolved" it. On-ice skirmishes were a typical part of the American NHL.



In the 2000/2001 regular season, Stu Grimson accumulated 235 penalty minutes and was involved in 19 fights. Over his career, he then participated in 729 games and received 2,113 penalty minutes, mostly after beating up his opponent.

There are a number of theories that try to explain why fighting has become a part of American hockey. The most common explanation is that the lack of rules in the early days of hockey competition allowed for physical intimidation. Other rules, such as the introduction of blue lines, where forward passes were allowed (but only in the "neutral" zone), merely exacerbated the problem. The game became centralized in the middle of the field, and skilful quarterbacks became targets of stronger physical play. Shortly thereafter, a point guard role was created, defending the quarterback and fighting when needed.

The change in the style of play has also changed the surrounding environment. Hockey defensemen became media stars and their animosity towards each other was a good tool for marketing campaigns. Thus, in the first half of the twentieth century, hockey sometimes looked more like rugby on skates.

Then in the 1970s there was a general increase in skirmishes. The Philadelphia hockey players served as an example of the future of the sport. With their "fighting" attitude, they won the Stanley Cup twice and the game went on without "defenders". Each team had a bruiser to protect its stars. In the 1980s, the number of fights rose to an all-time high, averaging more than one fight per game. Brawls became the norm, not the exception.

In January 1987, Todd Ewen, the young right wing of the St. Louis Blues, knocked Detroit's reputed tough guy Bob Probert to the ice with one punch. Bob fell unconscious. Todd, the team's rookie, secured his spot in the line-up as one of the many defensemen in the American NHL. Later in the same game, Todd and Bob fought again, even though just an hour before the Detroit star had been lying unconscious on the ice. This level of violence was typical. Todd played the next eleven seasons and brawled almost every game.

The fates of Ewen and Probert are similar. Both played a similar number of games; Probert was only a year older than Ewen. After they both quit professional hockey around 2000, their lives changed. They began to forget, their moods changed unpredictably, and they were not the same people who had

enthusiastically embarked on hockey careers. Both died before their 50th birthdays. Their deaths were one of the first catalysts in the debate about the effect of hockey brutality on players' brains.

Twenty years later, the situation is completely different. There were penalties for the perpetrators of the fights and for the players who engaged in them. In 2005, the NHL adopted a package of new rules. It changed the division of the rink, the conditions of passing in the middle zone and the rules of prohibited release. Even if a player provokes a fight in the last five minutes of a game, he is automatically out of the next game.

The number of fights per game has dropped three times in the last ten years. It's not just a decline in on-ice fights. The whole game has changed. The rule change created room for faster and more offensive play. The change didn't come immediately, but as time went on and there was no room for one-sided players like Stu Grimson, Todd Ewen and Bob Probert. The 2019/2020 season saw the most goals scored per game on average since 2005.

In 2018/2019, the NHL's greatest wrestlers fought six times in a season. In the 1997/1998 season, there were 56 players who were involved in a brawl at least ten times.

## Number of Fights in the NHL Per Game
*Source: https://www.hockeyfights.com*
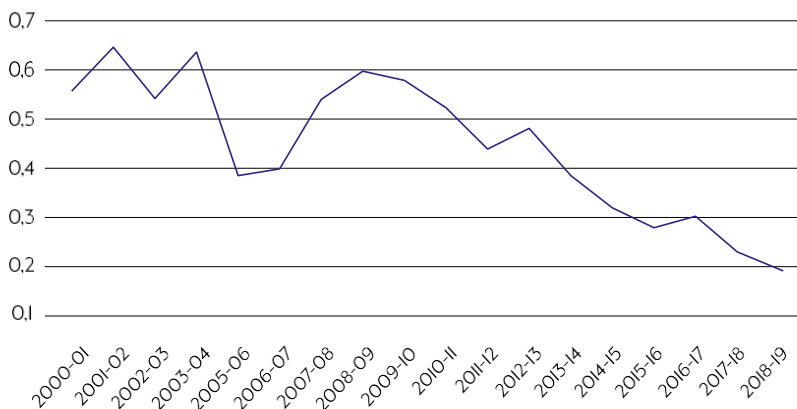
Every game evolves, strategies change, they keep improving and what was the best approach yesterday may not work today. As the game became more combative when it was the optimal strategy, it is now becoming faster, more attacking and more technical because it is more profitable for teams.

> *The rules determine what kind*
> *of game is played.*

The question is when and how to detect that it is time for a change. That the game is in crisis and what was well-intentioned is not bringing the desired benefit. When is the time to address, besides the results of the matches, what kind of game we are actually playing, whether we are satisfied with it and whether it is time to revise the rules. Because if we change the rules, we change the game.

# Social Crisis

**Lack of Trust in Politicians and Democracy**
Faith in democracy seems to be waning. More than half of the population worldwide is dissatisfied with the way democracy works and the state it is in. Of the 36 countries surveyed, the median satisfaction was at 46%, compared to 52% who said they were dissatisfied. In this country, only two-fifths of people are satisfied with the way democracy works. Although the situation in our country has slightly improved after the crisis of 2012-2013, a 40% support is hardly a state that can be described as positive.

Societies across the Western world are polarising along political lines. The number of people who are strongly political is increasing, political moderation is decreasing, and people are clustering in opinionated groups in which they also find friends to talk and discuss with. More than before, people identify with their political orientation and consider it an important part of themselves, more so than with other traditional categories of social identity, such as ethnicity and religion. Say what you think about Zeman, Babiš, immigration, Brexit, Trump, and your surroundings will tell you what kind of person you are.

One-sixth of Americans say they stopped talking to a close friend or relative because of the 2016 presidential election. When U.S. respondents were asked in 2010 whether they would mind if their children married supporters of a different political party, half of the Republicans and a third of the Democrats responded affirmatively. By contrast, in 1960, the figures were just 5% and 4%, respectively.



In the Czech Republic, one of the most trusted politicians in September 2019 was the Czech prime minister and leader of the ANO movement (trusted by 38% of voters in the survey), who was at the same time one of the politicians with the highest share of no-confidence (58%). Not a single politician surveyed was trusted by the absolute majority of respondents.

*Thus, as a society, we do not trust any of the leaders of the major political parties.*

The Chamber of Deputies is also divided, with the ANO, SPD (Freedom and Direct Democracy) and KSČM (Communist Party of Bohemia and Moravia) parties collectively winning more than 48% of the vote in the last parliamentary elections, which are unacceptable partners for many voters of the other parties. The split in society is also apparent in the 2018 presidential election, with a close result of 51.36 % for Miloš Zeman and 48.63 % for Jiří Drahoš.

**A Divided Society**

Social polarisation is unfavourable if we want to cultivate an environment where people think freely and critically about information and can reach a reasonable consensus together. In fact, a minority viewpoint cannot thrive well enough in opinion bubbles. There is often no one there to dig into the unified beliefs, point out the weaknesses of the arguments, and thus force others to reassess positions and refine arguments. This results in groupings where everyone agrees with each other and ridicules the common enemy, whom they despise and with whom they do not speak on principle.

People are best able to mobilise their critical apparatus if they are properly motivated to do so. Such as in situations where they have to judge something they disagree with. The following experiment aptly illustrates this phenomenon, which is related to the more familiar confirmation bias. Participants were asked to judge a study the conclusion of which showed that caffeine causes breast cancer. Which group of people disbelieved the conclusions and were most motivated to find flaws in the research? Women who drink coffee. They were the ones who were most interested in challenging the results.

**"Are you satisfied with the way democracy works in our country?"**

*Source: STEM, Trends 1993-2019*
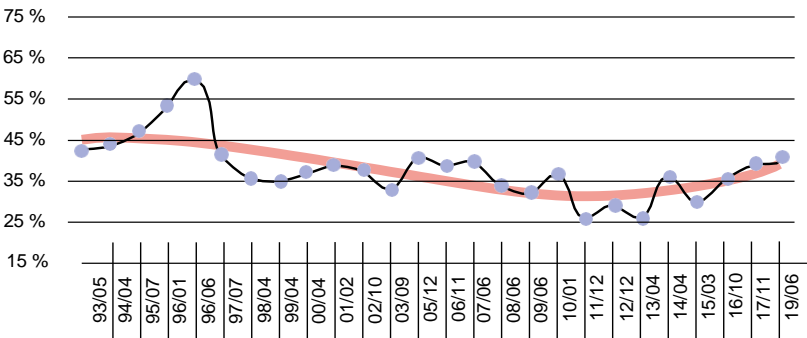
The nature of democracy is beginning to change. Citizens are moving from the moderate centre to the extremes in their attitudes. The left and right spectrum across Europe is polarising, further deepening the split in society.

The whole process is amplified by the role of social networks and intelligent algorithms offering personalised content with the sole purpose of keeping your attention. If you enter your opinion into an Internet search engine, you will be recommended similar and often more extreme opinions. Pluralism of opinion does not work in the comfort of your own home, quite the opposite. If you search for a YouTube video about vegetarianism, you will be offered information about veganism as a next step. And it is the same with political issues. The more time you spend with search algorithms, the more likely you are to end up on a more extreme spectrum of opinion than where you started, and down the rabbit hole you slowly fall further and further down. Everyone is following different information.

Zeynep Tufekci, the sociologist known for her research on the social impact of new technologies, described her experience during the 2016 presidential campaign. While watching a large number of Donald Trump videos, she noticed that YouTube began to offer racist content, Holocaust denial videos, and other odd material, even though she was only watching the mainstream of the campaign. She followed the same pattern with the other side of the political spectrum, while watching videos of Hillary Clinton and Bernie Sanders, she soon received recommendations to watch videos about conspiracy theories about the existence of secret government agencies and accusations that the United States government was actually behind the 9/11 attacks.

*A consensus of opinion and consensus in society is thus increasingly difficult to find.*

## Confidence in the President between 2003 and 2019

*Source: STEM, Trends 2003-2019*
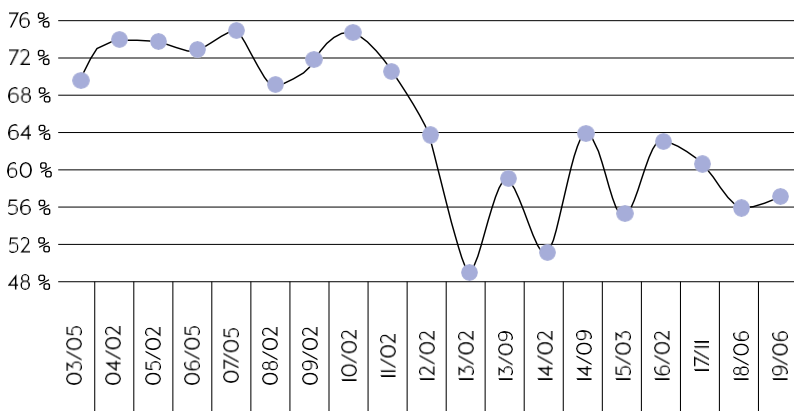


**Institute H21**

*Social polarization, freedom of speech and thought, constructive dissent, (lack of) trust in politicians and democracy - these are the central themes of our think tank Institute H21. You can find us not only in lecture halls, but also in bookstores - for example in the form of a more accessible edition of J. S. Mill's On Freedom of Thought and Speech. The highlight of our season is the annual symposium.*

*www.ih21.org/en/home*
*info@ih21.org*

# Lack of Interest in Elections

Former U.S. President Thomas Jefferson once uttered that "we do not have a government of the majority, but only of the majority that has participated". And globally, that majority is shrinking. The explanation is likely to be a combination of many factors, but the trend is noticeable with fluctuations both globally and locally. In the Czech Republic, voter turnout in elections to the Chamber of Deputies has been declining significantly since the 1990s. For Senate elections, the situation is even more deplorable. In the first round, turnout has never exceeded 50 % of eligible voters, and in the second round it is around 20 %. Thus, even around 10% of eligible voters is sometimes enough to elect a candidate. The Senate elections show the effect that the electoral system has on participation in elections, where the second round is not interesting for the vast majority of people, and they do not take part in the elections for many reasons. Low voter turnout deepens the alienation of society from political representation and can be both a cause and a consequence of distrust in democracy.
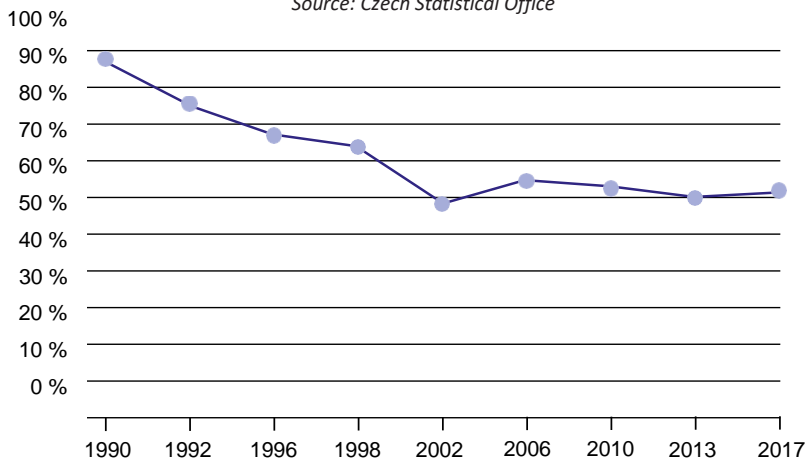
## Worldwide Voter Turnout 1945-2015 by Continent
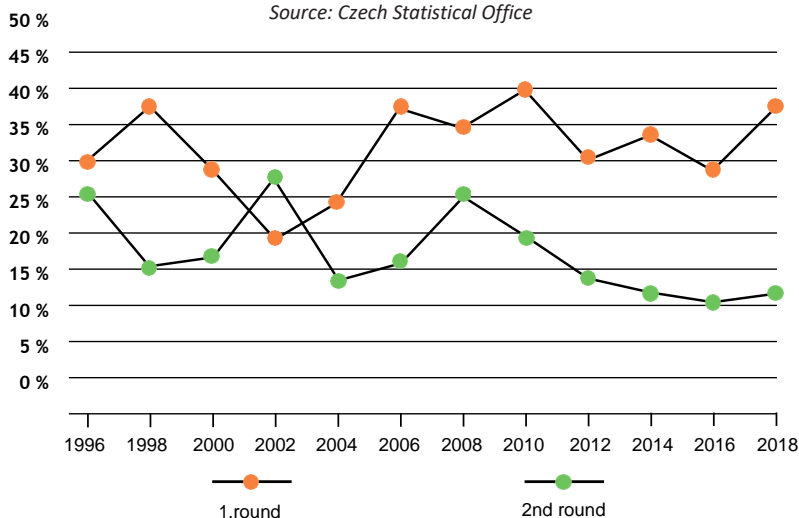
*Source: Voter Turnout Database*



Legend: Oceania, Europe, Americas, Asia, Africa
Global average
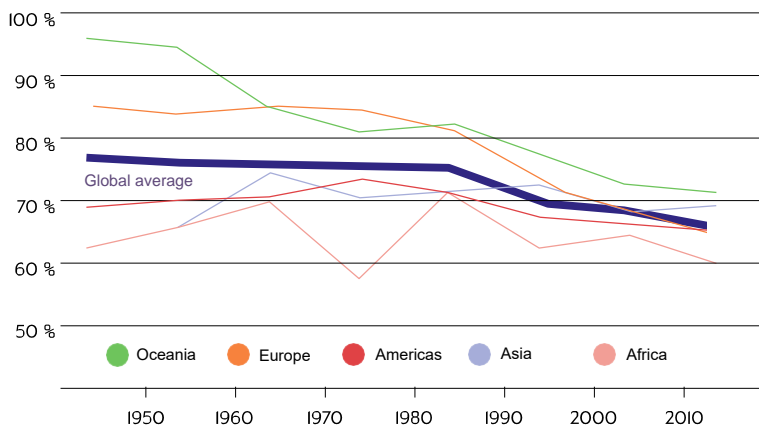
## Voter Turnout in the Czech Republic - Elections to the Chamber of Deputies

*Source: Czech Statistical Office*

## Voter Turnout in the Czech Republic
## - Senate Elections

1.round          2nd round

Democracy in practice is not perfect, it has its own problems, which have intensified in recent years. Larry Diamond, the eminent Stanford political scientist, describes a worldwide democratic recession. The international organisation Freedom House has shown the decline of freedom and democracy in the world for thirteen consecutive years. Yet Larry Diamond points out how important it is not to lose faith in democracy. As Tomas Garrigue Masaryk also said:

*"If our democracy has shortcomings, we must overcome those shortcomings, but not overcome democracy."*

As a society, we must come to an agreement. And we need to discuss how we find consensus in the first place, and how to adjust our machinery so that it strengthens, not weakens, the process.

# We Have to Make a Deal

Democracy, literally translated, is the rule of the people. A system that gives all stakeholders an equal right to participate in the decision-making process, either directly or through elected representatives. But how is the selection made? How to select the best way of group decision-making?

### How to Make a Collective Choice?

In everyday life, we often make choices in groups. Which restaurant are we going to go to with our friends? Which day of the week do we choose to meet our colleagues at work or for a class reunion? Are you and your partner going to see a romantic comedy, an action film or a horror movie in the evening?

If you and your friends are choosing which restaurant to go to in the evening, you may each have to make some sort of compromise. Although you may prefer your favourite steakhouse, if you have a vegetarian in your group, you'll probably end up preferring a different choice. One where everyone eats, and everyone is somewhat satisfied. As an individual you may have been happier, but as a group you will be happier.

Defining success is essential to choosing the right course of action that leads to that outcome. If you and your friends all want to eat together, choose a meal that everyone is willing to eat. If you can't all agree, you pick the option that the most people agree on. But

absolute consensus may not be always ideal. When you're arguing with your family about where to go on vacation, and your aunt wants to go to Slapy dam on Vltava like she does every year, if you try to agree, you'll never go anywhere but the Vltava River. You'll always have to make sacrifices, and although you'll all be together, you may end up less happy than if you left your aunt at home for once and all went to Croatia.

Lack of consensus can lead to extreme results, while striving for absolute consensus can lead to ambiguous decisions that almost no one will be happy with in the end.

In family and among friends, we know how to get along, we have opportunities to discuss and choose the best possible alternative. In a large group of people, such a process is more complicated. Joint discussion is replaced by pre-election campaigns and the choice itself is left to the electoral system. But the latter can have a major impact on the outcome. If you only have one vote and have to choose just one candidate, you can never express your true preferences.

How surprised we would be if we got an invitation to a class reunion in the e-mail with a link to a page where we had to choose the day it was to be held, just one day and one day only. Although perhaps you can take the whole week, you only have to choose one alternative. Naturally, fewer people would attend such a reunion than if you could select all the days you want from the same link.

*Whenever we vote with just one vote, there is a certain loss of information, the system does not allow us to say as much as we would like.*

If your class reunion can be attended by up to 30 people, you choose a day in one week, and the probability of having an evening off is 50%; if you are allowed to choose only one day, you will meet on average less than 17 people. If, on the other hand, you are allowed to mark all the options, there will be on average two more of you. If you extend the period to two weeks, only about 16 of you will be able to make the same choice. If you had voted in a more convenient way, there could have been almost 20 of you. When you elect with one vote, you don't know which option will also fit the others, thus increasing the likelihood of running into days when others can't make it. The quality of your selection then starts to approach that of a lottery ticket, because if there's a 50% chance that you have an evening free, then even without voting, an average of 15 people will show up to the reunion.

## The Wisdom of Crowds

Group decision-making ideally makes use of the knowledge of each member of the group. Thus, the difference of each individual can contribute to a better decision than even the best individuals would be able to make on their own. Two (or more) heads are better than one.

Aristotle wrote about the wisdom of crowds: "It is possible that the many, when they come together, may be better, not individually, but collectively. For where there are many, each individual may have a certain amount of virtue and wisdom, and when they are gathered together they also become one personality in terms of moral and intellectual ability." Thus, the collective can be better than each individual separately.

A well-known experiment describes how collective wisdom can work. In 1906, at the Plymouth Country Fair, people competed to guess the weight of an ox. Eight hundred people took part in the competition. The statistician Francis Galton was surprised to find that the actual weight of the animal (543 kg) differed from the mean value (i.e., the value exactly in the middle of each guess) by less than one percent (the mean value of the guess was 547 kg). People were amazed that, collectively, the wrong guesses on both sides of the spectrum cancelled out and resulted in a number that was almost exact.

A similar experiment to the one in Plymouth was repeated by the Harvard researchers. Instead of the weight of an ox, the participants estimated the number of chewing gums in the jars, from a small jar with fifty pieces to a giant jar containing twenty-seven thousand. The participants' collective estimates were very accurate, just as they were a century ago. But the study also pointed to another phenomenon, namely the influence of social interaction. When researchers communicated other people's (fictional) guesses, people adjusted their guesses (in two-thirds of the sample) and the overall result lost accuracy.

Group decision-making doesn't just have advantages. A group is substantially more prone to polarization. That is, it tends toward extreme solutions. In a group, people do not feel individual responsibility and are thus collectively willing to make decisions that they would never make as individuals. One example of group polarization is research on jury trials in determining the amount of compensation for damages. Juries that tend toward low compensation tend, after group discussion, to set compensation collectively even lower than individual jurors wanted. Conversely, if jurors tend toward higher compensation, the compensation will increase even more after a group discussion.

A group works best when there is a clear and correct answer to a question. Then the individuals' knowledge can combine, and the wrong guesses can cancel each other out. When there is no clear-cut answer, groups can reach completely unexpected results. This makes it all the more important to pay attention to the structure by which decisions are made. Any group decision-making must seek to leverage the knowledge of individual members and, in turn, avoid dangerous negative influences such as polarisation of opinion. Only in this way a group decision can be better than that of well-informed individuals.

**Being Part of the Decision-Making Process**
Ancient Greece is the cradle of democracy (and shared decision-making). Often idealised from a contemporary perspective, it laid the foundations for democratic processes. The Greeks voted often and on everything. Voting was done directly in mass meetings, usually by a show of hands; if a proposal won a majority, it was elected.

A lesser-known fact is that political leaders in Athens were often chosen not by vote but at random. The assumption was that representative democracy did not need experts, but good citizens.

Nowadays, such an approach is hard to imagine, and the word election is usually used to mean just electing one's political representatives, not actively participating in public decision-making about one's surroundings and the community in which one lives.

Shared decision-making does not have to be limited to elections a few times a year. An example of this is participatory democracy projects that try to involve the general public as much as possible in discussions and decision-making processes on specific issues through voting. Such projects aim to find solutions that are shared by the largest possible proportion of society and that take into account the different perspectives of a wide range of opinions. In the Czech Republic, this includes participatory budgeting projects. Local authorities determine the part of the budget that citizens decide on. They themselves propose which projects should be implemented and then decide which ones are actually implemented.

**Participation 21**

*Involving citizens in decision-making is the work of the organisation Participation 21, which has helped to implement hundreds of projects, not only in cities but also in schools. An exceptional example of Participation 21 was in Kutná Hora, where pupils from all eight schools worked together to come up with improvements in the town. In the end, they themselves voted for projects to extend the green space in the Šipší housing estate and to improve the Lorecký Pond.*

*www.participation21.com*
*info@decision21.org*

# Wrong System, Wrong Result

The fact that the debate over electoral systems is not just academic, but can have serious implications for our society, is demonstrated by a number of historical and contemporary events. The way we make our choices has a major impact on what we decide for. And sometimes those decisions are not entirely happy ones.
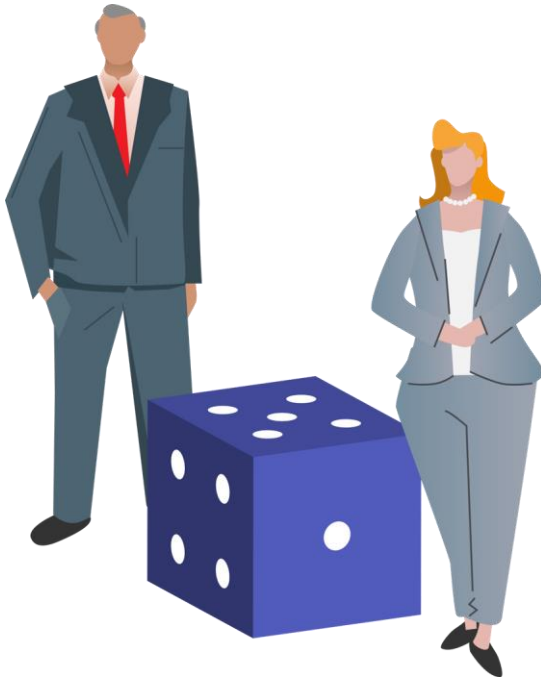
### Elect a Villain
Edwin Edwards is an American Democratic politician who served as a U.S. Representative in the U.S. Congress for Louisiana between 1965 and 1972 and then as Governor of Louisiana for four terms (1972-1980, 1984-1988, and 1992-1996). Edwards was an interesting character, well-dressed, charismatic, quick-witted, and quickly won the popularity of the public. During his career, however, he was associated with a series of corruption scandals, gambling and shady morals.

In the affair known as Koreagate, it was revealed that Edwards' wife accepted $10,000 in an envelope from a Korean businessman, Tongsun Park. Mr. Park lobbied for the sale of Korean rice to the United States. Edwards admitted that Park had given his wife a sum of money, but insisted it was a gift of friendship and there was nothing wrong with it. He commented on the situation by saying that it was extremely moralistic for the U.S. government to prohibit American businessmen from accepting gifts from foreign officials in trade negotiations. In 2001, Edwards was convicted of blackmailing and sentenced to ten years in prison.

After losing the 1987 election, everyone cajoled Edwards that there was no point in him running in another election, that with his tarnished reputation he had absolutely no chance of success. There was even a comment in the Shreveport Journal that the only way Edwards could win was if Adolf Hitler ran against him. Almost prophetic words.

In Louisiana, the election was a two-round system. If no candidate received the absolute majority of votes in the first round, the two candidates with the highest number of votes advanced to the second round (similar to the Czech Senate elections). Edwin Edwards, who was already very controversial at that time, advanced to the second round. The other candidate to advance was David Duke, a former supreme leader of the Ku Klux Klan (a militant organisation promoting white supremacy and racial segregation).

Although Edwards was completely unacceptable to most residents, dismay at the possible election of an open racist prevailed. Even the then President of the United States, George H. W. Bush, called for the election of a controversial Democrat instead of a member of his own party. People across the country spontaneously plastered their cars with signs saying: "Vote for the crook, it's important". Thus, in the second round, people had to choose between two unacceptable extremes and chose the "lesser of two evils". Edwards was aware of this, stating in an interview that all he had to do to win the election was stay alive. And he was right. He won the election by 61% to 39%.

## President Jospin

In 2002, France elected the President, again by a two-round system. Everyone expected a clash between the defending Jacques Chirac and the Socialist Party candidate Lionel Jospin, who was expected to win the first round. The pre-election polls suggested that no other option was realistic, but things turned out differently. Jacques Chirac came first with almost 20% of the vote, but the National Front candidate Jean-Marie Le Pen came second with 16.86% of the vote and Lionel Jospin came third with 16.18%. The result has opened a debate about the role of pre-election polls. Did the French society really want to choose between Chirac and Le Pen, or did many voters expect Lionel Jospin to automatically win the second round, so maybe they threw their vote to someone else, or maybe they didn't go to the polls at all? Although Le Pen's National Front described itself as a mainstream conservative party, it was more likely to be perceived as far-right and nationalist. Chirac won the second round 82 to 18. The biggest victory in the history of French presidential elections.

The election showed the potential weaknesses of the two-round system, where candidates with the highest support may not even make it to the second round, for example because of the fragmentation of the centrist vote among many candidates. This effect was also pronounced in the Peruvian elections of 2021, where 18 politicians have entered the race for the presidency. The support of the centrist voters was diluted, and the controversial populist Keiko Fujimori and the far-left Pedro Castillo of the Perú Libre group advanced to the second round. The latter eventually won the polarising election with 50.13% of the vote.

## The USA as the Cradle of Democracy

The election of the US President, arguably the most powerful man in the world, is accompanied by a number of electoral paradoxes. The President is not elected directly, but by the Electoral College, which is made up of the electors (representatives) of each state. Citizens elect this Electoral College, usually by a majority system. Each citizen has one vote and the candidate with the most votes wins. If the federal electorate does not give one of the candidates the absolute majority of the votes, the President is then decided by Congress.

The 1824 election was won by Andrew Jackson, who received 41% of the vote, while second-place John Quincy Adams received only 31%, third-place William Harris Crawford 13%, and fourth-place Henry Clay 11%. The President was not elected. In the subsequent congressional election, with only the top three candidates to choose from, Henry Clay surprisingly supported Adams, who became the President. Shortly thereafter, Adams appointed Henry Clay Secretary of State. The President was elected against the nation's preferences and with the taint of a backroom corruption deal. If it had been up to the voters to choose between Adams and Jackson, it's very likely the outcome would have been different. In 1828, Adams was no longer successful against Jackson.

Thanks to the Electoral College, the situation where a candidate who did not receive a majority of the popular vote wins, is quite common. In the 2016 election, Donald J. Trump was elected, receiving approximately 63 million votes. Hillary Clinton, who ended up second, received almost 66 million votes.

Although it is paradoxical, other candidates can substantially influence the winner in single-member electoral systems without having a chance of winning themselves. All it takes is for the support to be split, and the candidate who does not have broad community support suddenly has the most votes.

In 2000, this effect reappeared. Al Gore and George W. Bush were running against each other in the election. But Ralph Nader, who won less than 3% of the vote, played the balance. Had Nader not run, it is very likely that Al Gore would have won. However, thanks to the recount of votes per voter, George W. Bush won despite receiving fewer votes from the people (47.87%) than Al Gore (48.83%). People voted with one vote, they could not express more preferences, and so, thanks to the system set up, they probably voted for a different candidate than the one they actually preferred.

*The electoral system matters.*

# From a Chequered History

Electoral systems, like society as a whole, undergo evolution, and not all methods used in the past would be considered appropriate today. Like the relatively simple concept from ancient Sparta, where the election of members of the council of elders was done by roaring. The candidate who received the loudest shouting from the council members was elected. So, the voice of the people was truly heard. Or the aforementioned Greece, where the election was often left to the lot.

However, history also shows examples of extremely complicated electoral systems.

The Venetian state had a problem with the influence of powerful families in the election of the Doge (head of state). A complex system of a staggering ten rounds of voting and drawing lots has been developed to ensure that individual clans cannot actually influence the choice.

In the first round of the election of the Doge of Venice, 30 representatives were chosen by lot from all the members of the Grand Council, but the next lot narrowed the number down to 9. The selected 9 elected 40 representatives. Then 12 individuals were drawn again. They selected 25 others. From these, the lot selected 9 representatives who elected 45 representatives. Of these 45 members, 11 were selected by lot. Those 11 finally elected 41 electors who in the end elected the Doge of Venice.

Although such a choice may seem somewhat ridiculous from today's perspective, mathematical models that analysed the system show that repeatedly reducing the number of voters by lot and then increasing it by election has interesting mathematical implications that give a chance to underrepresented parties while favouring popular candidates. In Venice, such a system was introduced in 1268 and lasted until 1797. Over 500 years of an extremely complex system and at the same time 500 years of a stable Venetian Republic.

Another seemingly bizarre electoral procedure was also introduced in the 13th century for the election of the Pope. In 1274, Gregory X established the election of the Pope in a closed space and with minimal convenience. This measure was intended to prevent the electoral process, which in previous centuries often took weeks or months, from being too prolonged (around 1270, the election lasted a full 31 months). However, the cardinals were not only motivated by the enclosed space they were not allowed to leave, but if the choice lasted too long, the food supply began to be reduced and after five days only bread was served.

Both the Venetian election and the election of the Pope have something in common, the system was adapted to address the problems the community faced. In Venice it was corruption and the intertwined interests of individual families. In the Church, on the other hand, it was the impossibility of agreement and the prolongation of the period of powerlessness. My motivation to come to an agreement will surely be greater if I am otherwise facing a stay in the dungeon on bread and water. And how to corrupt the elections if I don't know who will vote in the end?

*Electoral systems, like society as a whole, undergo evolution.*

# Who We Vote For

A chain is only as strong as its weakest link. An electoral system, on the other hand, can only be as strong as the best possible alternative. Thus, if all the alternatives are weak, the electoral system does not play much of a role.

Without quality candidates, the electoral system is clueless, but a properly chosen system can help to produce truly quality candidates.

Even with equal preferences in a group, it is possible that each voting system will pick a different winner. If preferences are clear and there is a popular candidate that the majority supports, it is likely that he or she will win no matter what system we use. But often the situation is not so clear-cut, and it is not easy to choose the most suitable candidate. The more ambiguous the choice, the more the electoral system matters.
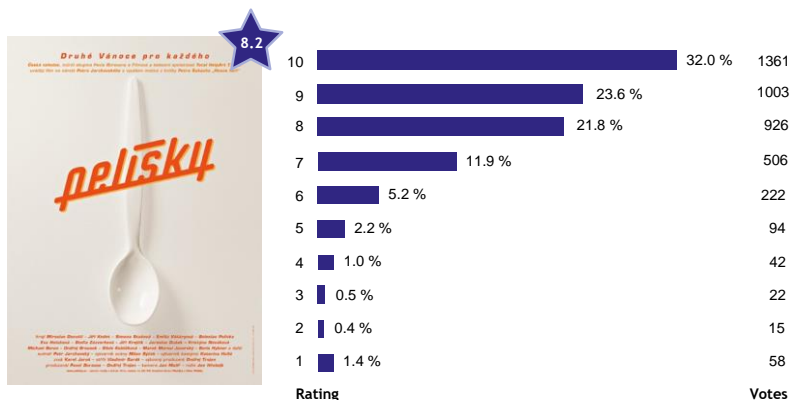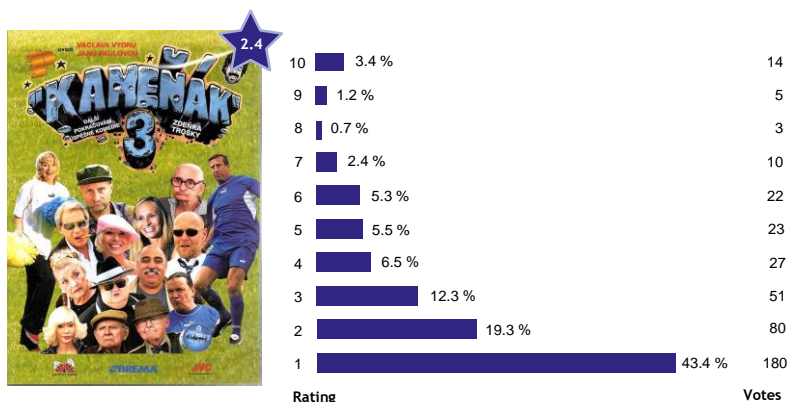
But if we have a choice between a number of options, some of which are controversial or whose support is ambiguous, the electoral system will decide which type of candidate will be the winner.

An example would be choosing a film for the evening. According to the International Movie Database, Pelíšky is clearly a popular film. In contrast, Kameňák 3, for example, is an unpopular film. Thus, most reasonable voting systems will always prefer Pelíšky to Kameňák and other, perhaps mediocre, films.

Another example would be the film Román pro ženy (Novel for Women). Not many people would probably call it their favourite film, but on the other hand, it's not a film that most people would find absolutely terrible either. Its popularity is somewhere in the middle.
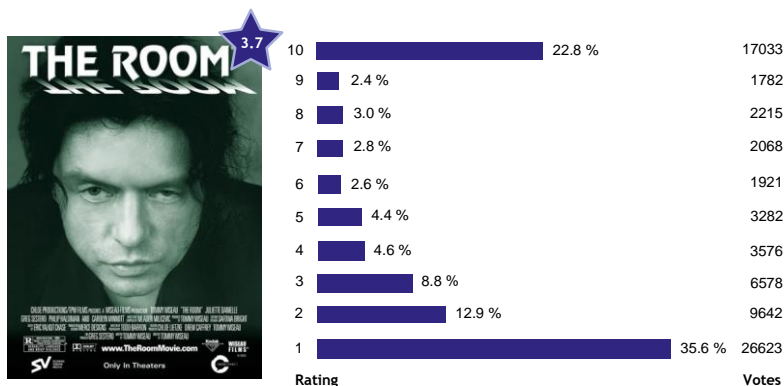
Let's contrast this with the film The Room. A relatively unknown work in the Czech Republic, but it has a cult status abroad and has gained a great popularity among a select audience. The film is popular mainly because of how flawed it is in every way. A work that is so bad it might as well be good. Totally unwatchable for most people, but very popular for a certain group. The film divides people into two camps. Those who love it and those who hate it. It's a polarizing film.

## Ratings of Román pro ženy and Kameňák 3
## by imdb.com users



| Rating | | | Votes |
|---|---|---|---|
| 10 | 3.4 % | | 14 |
| 9 | 1.2 % | | 5 |
| 8 | 0.7 % | | 3 |
| 7 | 2.4 % | | 10 |
| 6 | 5.3 % | | 22 |
| 5 | 5.5 % | | 23 |
| 4 | 6.5 % | | 27 |
| 3 | 12.3 % | | 51 |
| 2 | 19.3 % | | 80 |
| 1 | 43.4 % | | 180 |



| Rating | | | Votes |
|---|---|---|---|
| 10 | 32.0 % | | 1361 |
| 9 | 23.6 % | | 1003 |
| 8 | 21.8 % | | 926 |
| 7 | 11.9 % | | 506 |
| 6 | 5.2 % | | 222 |
| 5 | 2.2 % | | 94 |
| 4 | 1.0 % | | 42 |
| 3 | 0.5 % | | 22 |
| 2 | 0.4 % | | 15 |
| 1 | 1.4 % | | 58 |

If we put Román pro Ženy and The Room against each other, the choice will not be so clear. If given a choice between a number of mediocre films and The Room, the one-vote choice often goes to the controversial Room.

## Ratings of Román pro ženy and The Room
## by imdb.com users

**5.8**

| Rating | % | Votes |
|---|---|---|
| 10 | 7,4 % | 52 |
| 9 | 6,7 % | 47 |
| 8 | 11,9 % | 83 |
| 7 | 20,1 % | 141 |
| 6 | 19,1 % | 134 |
| 5 | 15,1 % | 106 |
| 4 | 7,9 % | 55 |
| 3 | 4,7 % | 33 |
| 2 | 4,1 % | 29 |
| 1 | 2,9 % | 20 |

**3.7**

| Rating | % | Votes |
|---|---|---|
| 10 | 22.8 % | 17033 |
| 9 | 2.4 % | 1782 |
| 8 | 3.0 % | 2215 |
| 7 | 2.8 % | 2068 |
| 6 | 2.6 % | 1921 |
| 5 | 4.4 % | 3282 |
| 4 | 4.6 % | 3576 |
| 3 | 8.8 % | 6578 |
| 2 | 12.9 % | 9642 |
| 1 | 35.6 % | 26623 |

Is it better to prefer a film that pleases a relatively small group of people, or a film that may not delight so many people, but at least everyone will finish watching it? We can leave the film, watch our own, visit another cinema. But we all have to live with the choices we make as a society.

# How We Vote

We choose in different ways for different purposes. It will surprise no one that in figure skating the judges have a different tool at their disposal than the people selecting their representatives. Even in figure skating, the judges could only choose the best, but the subtle differences would be lost, where one competitor, for example, excels in the difficulty of his or her performance, but the execution is not precise, and vice versa. The choice is thus deliberately more complicated. In the real world, however, it would be hard to imagine that voters would have to evaluate each politician in a range of categories. Do I agree with the politician ideologically, does he or she have the necessary experience, is he or she a good manager, does he or she have a good reputation? Soon the evaluation would become utterly confusing. And how to determine the importance of each category? Too much complexity is not always helpful.

### Electoral System

So, what is the electoral system? This may seem like a more complex issue than it actually is. An electoral system is a way to pick a winner in any election. And we choose a winner by examining three basic elements:

- How can voters have their say?
- How is this data processed?
- How many winners are there and what process is used to select them?

These three basic pieces of information determine the type of voting method. Change one of them and you have a completely different voting method and quite possibly a completely different winner. There are a number of divisions of electoral systems, generally the methods of election can be divided into those where  we  can determine the order of options and those where we can't.

### Where We Do NOT Determine the Order

Where we do not determine the order, we have a binary split, we either support the candidate or not. The system tells us how many votes we can give, from one to as many as we want. The fewer

votes we award, the more strongly we express our preference for fewer options. We make it clear what we really want. The more votes we grant, the more we are saying what we are still willing to tolerate as an acceptable option, what compromise is still acceptable to us. But the more of our strong preferences for what we really want to get lost.

Perhaps the simplest voting system thus asks us which of the given options we want, we choose one option. It's intuitive; when you're choosing a restaurant for the evening, you vote on which song is the best, what colour jersey your football team should wear. Anything where you end up picking just one option. Why would you say more, you can say exactly what you want with one vote. And yet almost anyone who deals with voting systems will tell you that it is a really terrible way to choose anything together. Try to think of a voting system where less of your preferences would be left than if you used one vote. Unless, perhaps, you dropped an empty envelope in the ballot box.

Your whole point boils down to expressing a preference for one choice. But what about the other choices? I want the red jersey, but I don't mind the green one, just please don't vote for the turquoise one. Before you vote, you'll go around to all your teammates and ask them what they're voting for. Because if no one wants red, you'd rather go for green, just so turquoise doesn't win. The system forces you to behave strategically, dishonestly and guess how others are likely to behave.

On the other side, there is the endorsement method, where you can comment on every option. If this is how you choose which day of the week your party will take place, the method is ideal. You don't care which of the days you have off the party takes place. You choose the options that work for you and leave out the options where you can't make it. The endorsement method allows the group to choose the least controversial option, but it no longer allows you to distinguish your favourite options from those that are merely acceptable to you.

Between these two extremes, there are a number of voting mechanisms (for example, the two-round method used in the Czech Republic to elect senators and the President of the country).

**Where We Determine the Order**
In contrast, there are mechanisms that allow us to distinguish between the different options, which one we want most, which one a little less and which one the least. Whether it is a ranking of the candidates from best to worst, or the analogy of grading on different scales as at school. Determining the order allows us to show more precisely what we want, how we like each option. Which one is acceptable and which one we really want. On the other hand, even such systems have fundamental flaws.

They assume that one has a good overview of the various possibilities. For example, if you were to choose the best of the Czech films of 2019, chances are you haven't even seen all of them. And how do you rate something you don't have an opinion on? In politics, a similar problem arises; you hardly know the election programmes of all political parties or individual candidates. In 2017, for example, 31 parties and groups ran in the elections. Even for the 2018 presidential election, most of the population would probably have a problem comparing Jiří Hynek, Petr Hannig and Vratislav Kulhánek.

Another problem is the possibility of manipulation. Due to the large number of candidates, it may not be the best strategy to rank them according to their actual preferences. For example, we may find it harder to strategically position candidates who enjoy a lot of support from others and increase the chances of our favourites getting the best result. Why place someone last who has no chance of success anyway, and why give an average grade to someone who has a lot of support from others. If I rate him or her poorly, my candidate could win.

# Overview of Electoral Systems – Nonranked Voting

### First-Past-the-Post
*The voter has one vote and chooses one candidate. The winner is the candidate with the highest number of votes. The first-past-the-post method is very common to determine one winner. It is used by about a third of countries worldwide (e.g., the United Kingdom, the United States, India and Canada). A major disadvantage is the possibility of a high number of wasted votes. If there are 5 candidates running, just over 20% of the votes may be needed to win. Almost 80 % of the votes will be lost and, in addition, the best candidate may not often be selected due to vote splitting.*

### Two-Round System
*The voter has one vote and chooses one candidate. In the first round, the candidate who receives the majority required to be elected, usually 50%, can become the winner. If no-one receives this proportion of the votes, a second round is held, where the predetermined number of the most successful candidates from the first round, usually two, advance. The winner is the candidate who receives more votes. A system widely used around the world, for example in the election of the President in France, Austria, Poland, etc. In the Czech Republic, it is used in the Senate elections and since 2013 also in the election of the President of the Republic.*

### Approval Voting
*A voter has the same number of votes as the number of candidates. A voter can cast his or her vote for one or more candidates, thereby "approving" them. Each of these votes carries equal weight. The candidate with the most votes is the winner. It is not used much in elections to the chambers of parliament. Approval voting is more often used at the level of elections within various political and interest organisations.*

# Overview of Electoral Systems - Ranked Voting

## Borda Count

*Borda voting was proposed by the mathematician Jean-Charles de Borda in 1770. Voters rank candidates from best to worst and assign them points. The candidate with the highest total number of points wins. Points can be allocated in an even numbered series, e.g., 5; 4; 3; 2; 1; but also in an even numbered series where the points are not equally spaced, e.g., 10; 7; 5; 4; 3; 2; 1. However, this count is not used much in the electoral process - it is only used for Lower Chamber elections in Nauru.*

## Alternative Vote

*Alternative vote (also known as instant-runoff voting) is an electoral system that allows multiple votes in a single election. It is used in Australia (it is also known as the Australian system) and in the election of the President of Ireland. Each voter can number any candidate according to his or her preference. The first count determines whether any candidate received over 50% of the first vote. If so, he or she is elected. If not, the weakest candidate is eliminated and his or her votes are divided according to the second preference. If a candidate receives a majority, he or she is elected. If no one gets a majority, the process continues until the candidate with the majority of votes is elected.*

## Range Voting

*Anyone can grade the candidates on a pre-determined scale, e.g., yes; no; don't know, or on a point scale, e.g. from one to ten. The marks are added up and the candidate with the highest score wins.*

## Condorcet Method

*This is more of a group of methods. The Condorcet criterion selects the candidate who would have won against any of the opposing candidates if only the two had competed in the vote. However, it could theoretically be the case that voter preferences are cyclical - for example, in a three-candidate election, where the rock beats the scissors, the scissors beat the paper, and the paper beats the rock. Then it depends on the particular method chosen to determine the winner.*

# One Vote
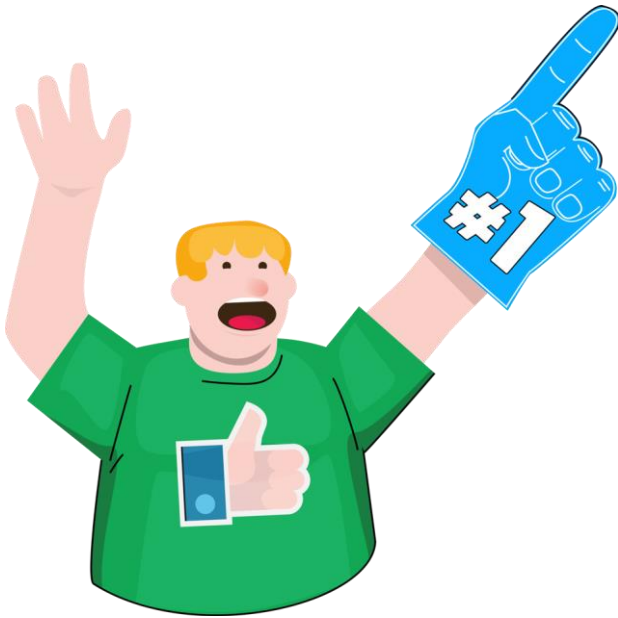


## *It is inconclusive*

To say less is almost impossible. You have an opinion on most of the options, and yet you can only comment on one.

## *Makes you betray*

Should you support the candidate you want and risk the one you don't want to win, or should you betray and vote for the one who has the best chance of beating the unwanted candidate? How good is an electoral system that punishes you for voting for what you want?

## *It divides the votes*

Two similar options will lose against one different one just because they split the support between them. All it takes is a small overlap, a few votes, and the outcome is different. It doesn't make sense for the option that doesn't win to decide who wins.

## *It's the extremes they choose*

Centrist candidates are marginalised, and we often see a contest between two different political spectrums. No one stays in the centre. Left or right? It pays to move away from the centre, and with a one-vote system, there is no room in the centre for a strong candidate, even if the majority would like it.

## *It doesn't want others to play*

It creates barriers to entry for other candidates. There is no point in voting for a candidate who has low support. Sufficient support creates more support, so entering the political contest is extremely difficult. New candidates receive less support than they are entitled to.

### On the Internet

A major poll has appeared on the lidovky.cz internet server that follows the same trend of opinion polls around the world. Which is the best seat on the metro? The lone one of the three? One of the seats opposite? Or perhaps one of the seats in a row? Although 8 options were available, site visitors could only cast one vote. As of the end of 2019, the lone seat of the three, the popular candidate, was the sovereign winner with over 60% of voters voting for it. Nevertheless, we were able to find out much more detailed information about the popularity of all seat types from the survey. With only the strongest preference revealed, we can hardly learn more.

# Prague Metro Seat Popularity Poll

*Source: lidovky.cz*



**1:**   **Aisle seat in three**

45

**2:**   **Window seat in three**

174

**3:**   **Single seat in three**

866

**4:**   **Seat in the row closest to the door**

149

**5:**   **Second seat in the row**

34

**6:**   **Third seat in the row, closest to the central bar**

53

**7:**   **Window seat at the end of the carriage**

66

**8:**   **Aisle seat at the end of the carriage**

50
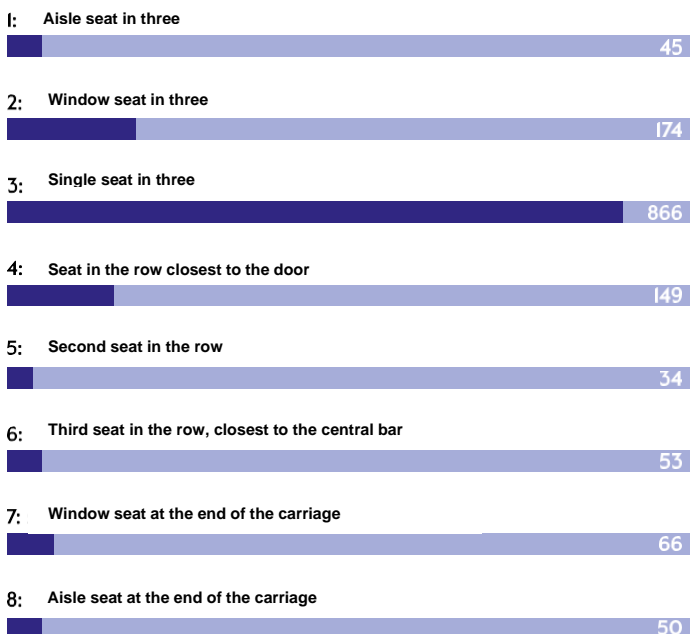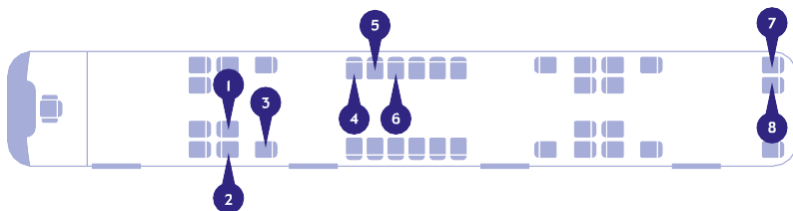
We often get internet voting wrong. We often have a number of options that are similar, and artificially forcing voters to choose just one option makes no sense. The results are often meaningless and uninformative. But just give people a chance to select multiple options or grade the options and we might even get results that

are much more representative of what the voters/electors really want. On the server idnes.cz, we could choose as many options as we liked when voting for the most beautiful bride of 2019, and when voting for the best computer game, we could vote for up to 3 options. Even online polls can be done better.

# What is a Majority?

When someone wins an election with less than half the votes, how does that make us feel? A lot of people would probably label such a winner as unfit. As someone who doesn't deserve to win, who is not wanted by the majority. But what is a majority? A seemingly simple question, but in the world of electoral systems, not everything follows intuition, and the concept of "majority" is no exception.
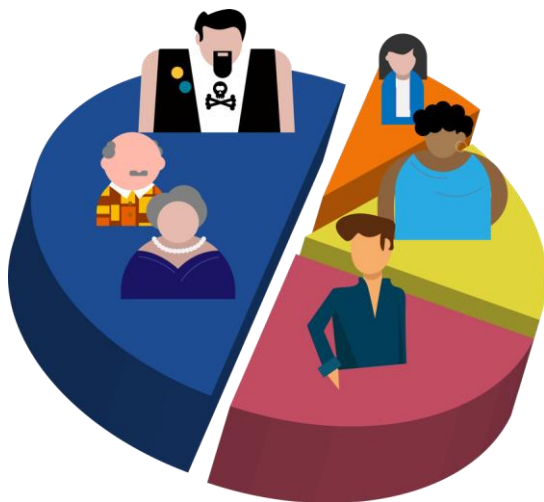


In electoral systems, there are at least three variations of majority.

The "smallest" is the relative majority that constitutes the largest fraction of a whole. If there are five cakes in the display case in a sweet shop, two cherry ones, one raspberry, one walnut and one chocolate, the cherry cakes are the largest group. There are more of them than of any other, but together they do not make up the absolute (more than a half) majority. The absolute majority would be fruit cakes.

Everyone would probably also expect that a candidate capable of beating any other candidate in a one-on-one contest (i.e., a so-called Condorcet winner) should be the winner of the election. Yes, the candidate who would have an absolute majority will also meet this criterion, i.e., he or she will beat all other options. But the reverse need not be true. A Condorcet winner may not also get an absolute majority, and moreover, may not exist at all. Just imagine a game of Rock, Paper, Scissors. Which object is the best?

In any election, "majority" is a strange concept. An absolute majority or a Condorcet winner sounds intuitively right for the definition of majority, but such winners do not always exist. A relative majority then leaves the aftertaste of an incorrect winner. In the Czech Republic, however, we use a two-round electoral system to elect the President and Senators, and that does guarantee a majority, doesn't it?

The two-round system is similar to the first-past-the-post system, with the top two candidates from the first round advancing to the second round. The catch, however, is in the first-round selection, where the one-vote option can eliminate good candidates. Does it seem strange that a good candidate is neither first nor second in the first round? Extreme candidates can "displace" the central candidate. The latter could have the most support in a one-on-one second round.

*Often, we are choosing between two completely different candidates who are unacceptable to the other side of the spectrum.*

Most often, we decide by one vote. This kind of election suggests that the central candidates have little support, that society is not interested in them. But the opposite may be true. If voters could have more say, with more votes, the picture of some candidates could change fundamentally. Even a candidate who does not get enough support in the first round may be able to beat everyone else.

Thus, in a two-round electoral system, we can often have two completely different candidates in the second round who are unacceptable to the other side of the electoral spectrum. Although one of them will eventually win an absolute majority, that majority is misleading. In a contest between two candidates, an absolute majority will always be found, but the question is what options we are actually choosing between.



left-wing ideology right-wing ideology

35 % 30 % 35 %

left right
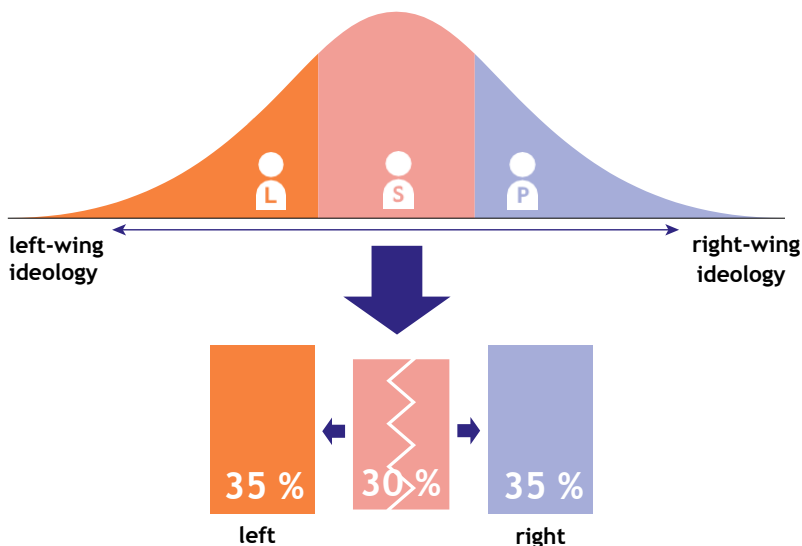
## The Majority in Practice

The majority vote is not natural. It is over two thousand years old, used in ancient Greece and China, and perhaps that is why it seems the simplest solution. But in the context of today's problems, it will be hard to find justification for it. People often feel they have to choose between two extremes. Chocolate or vanilla ice cream? Right or left? Stay in the EU or leave?

The majority's decision was the start of civil wars in Northern Ireland, Rwanda, the Balkans and Ukraine. Choosing between two alternatives is the oldest, most primitive and inaccurate way of making decisions. If we allow people to comment on more than one option and choose the option with the highest average preference, we get a more accurate answer. Such a system attempts to satisfy as many people as possible, not a mere "majority".

Majority voting is inherently very hostile, forcing people to take one party's side. And if the voting method is hostile, so is the pre-election debate. And more wedges are driven into an already polarised society. The voting method should encourage a broader social dialogue and favour solutions or candidates that satisfy the largest number of voters.

The referendum in Northern Ireland in 1973 looked like an election held in the Soviet Union, with 98.9% of voters voting to remain as part of Britain, with a turnout of 58.7%. The vote was boycotted by the nationalists and, not surprisingly, the result could hardly have been otherwise. Indiscriminate majority decision making is dangerous, and even more so in troubled areas. The situation in Northern Ireland did not calm down until the mid-1990s.
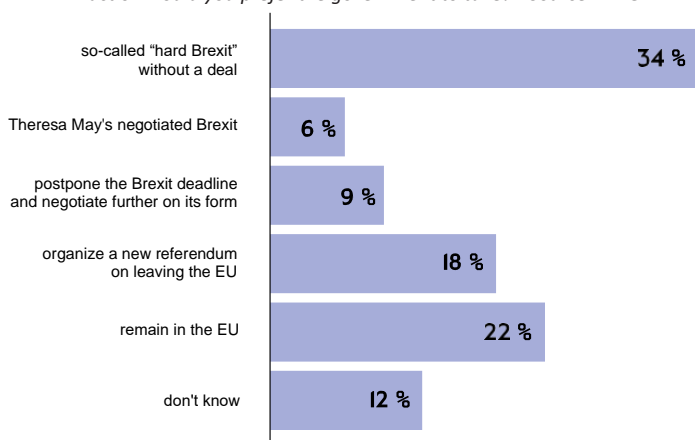
**Black or White**
In 2016, David Cameron's British government put a simple question to the nation. Stay or leave? A binary question. Yes or no. There is probably no other issue in modern history that could divide a nation and Europe like this. In the end, just under 52% of the population voted to leave, setting the direction of British society for decades to come.

Although the nation appears to have made a democratic decision, a closer look at the various options is more complex. The whole process of leaving the European Union has proved to be much more complicated than a black and white question might suggest. Subsequent polls on the Brexit negotiations have shown that none of the possible alternatives has the support of the absolute majority of the population or of members of the British Parliament. The

binary question did not make it possible to find out the preferences of centrist voters who may not have wanted to stay in the European Union in the current set-up, but on the other hand did not want to leave at any price, a "hard" Brexit. Opinions shrank to two extremes and the political representation had difficulty finding the necessary consensus.

## UK Voters' Preferences on Brexit Negotiations
## July-October 2019

*"If the terms of Brexit are not negotiated by the end of October, what course of action would you prefer the government to take?" Source: BMG*

| Preference | Percentage |
|---|---|
| so-called "hard Brexit" without a deal | 34 % |
| Theresa May's negotiated Brexit | 6 % |
| postpone the Brexit deadline and negotiate further on its form | 9 % |
| organize a new referendum on leaving the EU | 18 % |
| remain in the EU | 22 % |
| don't know | 12 % |

The political stalemate was also demonstrated by the British Parliament's efforts to resolve the situation in March 2019 through a series of indicative votes. The MPs non-bindingly voted on 8 possible options (from a hard Brexit to remaining in the European Union). However, none of the proposals received the absolute support. Hard Brexit received the lowest number of votes, with 400 MPs against and only 160 in favour, while the closest to approval was a new referendum with 268 votes for and 295 against.

So, what did the British people actually want? A number of polls have focused precisely on comparing the incomparable. Hard Brexit or staying in the European Union; approve the deal with the European Union or call a new referendum? Such a vote cannot show the true 'will of the people', but it does show a choice between two unpopular options. The Brexit paradox is a good

illustration of the importance of choice. If we ask a question with three options (i.e., hard Brexit, Brexit with a deal, or staying in the European Union), staying in the EU or leaving at any cost will be the options with the most support in a one-vote election. However, the Brexit option with a deal, which will often have the least support in a one-vote vote, is the most consensual option. That is, one that even centrist voters will support. How we ask, how we vote and how the results are interpreted matters. The population's preferences on Brexit show that how the decision is chosen is very important. Whether the winning option will leave society divided or whether the path that is most acceptable to the widest proportion of the population is chosen.

# Some Aspects of Electoral Systems

**Difficulty of Choice**
The more we have to say about our preferences, the more difficult it is to choose an electoral system. The number of different variations of our choice is increasing. However, complexity increases differently for each electoral system. If we vote with one vote and have three candidates, then we logically have three choices (or the option not to vote). In approval voting (the possibility to say yes or no to each candidate), the number of options already grows exponentially and even faster in preferential voting. In the case of 10 candidates, there are 10 options for the first-past-the-post, 1 023 for approval voting and 3 628 800 for preferential voting. As the number of options for expressing our preferences grows, so does the number of options from which we have to choose. This increases the demands on the voters themselves.

*The ideal electoral system is honest and motivates everyone to vote according to their true preferences.*

## The Number of Possible Voting Combinations
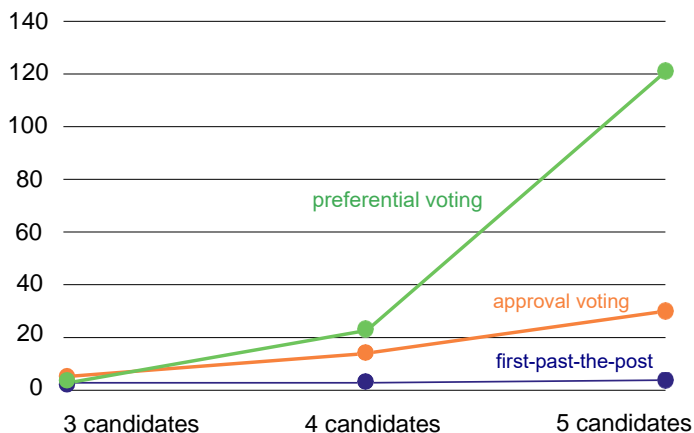


## Strategic Voting

One of the fundamental aspects of elections is honesty. As the number of voting options grows, the question of how to vote in a way that is most advantageous to us becomes more pressing. If we're deciding at work what social activity to choose for our party, and I prefer go-karting, I won't mind going bowling, but there's no way I'm going to want to spend the evening at a cooking class, it's going to depend on the voting system and the preferences of others to maximize the chances of success of an evening at the wheel. If I vote with one vote, my best choice may be to vote for go-karting but also bowling. If I vote by the approval voting method, I can approve either go-karts only or both go-karts and bowling. In an ideal world, everyone chooses according to his or her real preferences, which only he or she knows. However, some voters think strategically, so that the outcome will be exactly as they want it. The ideal voting system is honest and motivates everyone to vote according to their true preferences. Only in this way can any system choose the option that maximizes the benefits of the group, not the individuals.

# Absurdities of Electoral Systems

Electoral systems can be compared from many perspectives. Whether they are prone to individual paradoxes, how much information they require from the voter, the comprehensibility of the choice of the winner, how difficult the election itself is, how much they motivate people to vote honestly according to their true preferences, how often they pick just one winner. Every electoral system has its strengths and weaknesses. There are situations in which its use is appropriate and produces the most appropriate outcome, and then situations in which it does not do so well. Often it is the system that decides the outcome. And it can produce absurd, surprising results, or force voters to behave in seemingly illogical ways. There is no ideal electoral system, and it is all the more important to know the weaknesses of each system.

### He or She Beats Them All, And Still Doesn't Win
*Anyone would expect that if there is a candidate who beats any other candidate in a pairwise comparison, the electoral system would discover and select such a candidate. However, some electoral systems quite often fail to do this. Just imagine a controversial option among the candidates (such as the film The Room).  Although this option will never beat the other candidates in a one-on-one contest, it can often be the winner in a larger group.*

### The Absolute Majority Wants Him or Her,
### and Yet He or She Won't Win
*A candidate may not be elected even though he or she is the first choice of the absolute majority of the people. In one-vote elections this situation will never arise, but in some multiple-vote methods or those that determine the order of candidates, this situation can arise quite easily. On the other hand, electoral systems that do not always select a candidate with the absolute majority can also be seen as preventing the tyranny of the majority. They don't elect a candidate who may be popular with a slight absolute majority but is hated by everyone else. And maybe there is another candidate who would be acceptable to the broader population. But that's what electoral systems that focus on finding a consensus, not a majority, will find.*

## When it's Better to Lie
*Do you want to vote your way, but others prefer other options? Do you vote for the lesser of two evils just so your vote doesn't go to waste? So do a lot of other people. Many electoral systems often force you not to vote honestly, but with an eye to how others will vote. Every time the electoral system forces you to vote for someone other than your favourite, or to rank candidates differently from your honest preferences, the electoral system is not working as it should.*

## Better Not to Vote
*Better stay home and not vote? Well, that can happen, too. In some electoral systems, your own honest vote can do you harm, and the outcome of the election would have been more favourable to you if you had not participated at all.*

## There Was a Winner and Is No More
*Taking away the worst-case scenario, which almost no one wants, would you expect the winner to remain the same? Wrong, for many electoral systems change will happen, and in reality these situations do occur. Like in the 2000 US presidential election when Al Gore lost the election and Ralph Nader, who got less than 3% of the vote, was the balance.*

## Create Clones
*If we're choosing among films in the comedy, horror, and drama genres, and we all agree that we want to get scared in the evening, is it still possible in some voting systems (especially single-vote ones) that we'll end up watching a comedy or a drama? For example, if we are choosing among one comedy, one drama, but multiple horror films? Everyone feels that simply adding identical or similar choices should not, in principle, affect the winner. Yet, in reality, this happens quite often.*

# Could it Be Better?

There are numerous voting systems. So, which one is best? The answer will depend on who you ask and what criteria you use to evaluate. But the basic parameters should be covered by any good electoral system. It should pick a good winner, it should promote fair competition among candidates, and it should be easy to understand. A good winner is not the one who gets enough votes, but the one who actually makes society as a whole most satisfied. A good political contest does not discourage candidates from participating, but instead encourages candidates who can become good winners. Last but not least, the system needs to be simple so that everyone understands how to vote and how the winner will be chosen. The current widely used electoral systems often fail to meet these criteria, selecting winners who are not the best candidates, discouraging candidates with broad support from taking part because they might split the vote of centrist voters, and instead favouring candidates from the more extreme ends of the spectrum.

### D21 – Janeček method
D21 is a modern voting and election tool that allows voters to use multiple plus votes (usually 2-3) and in some cases also includes minus votes. With a wider variety of votes, it is possible to express preferences more accurately and also achieve greater social or group consensus.
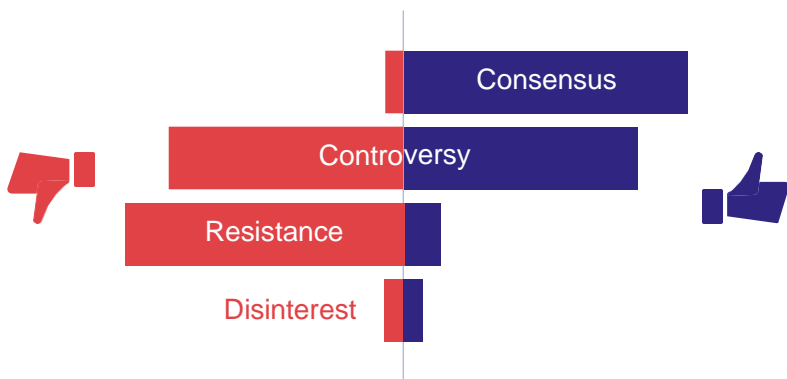
D21 stands halfway between a first-past-the-post and an approval voting. It takes the good from both sides. On the one hand, it forces voters to choose their strong preferences. On the other hand, it makes more votes available to the voter, so they don't have to choose between the lesser of two evils and can vote honestly. It supports strong candidates, not little mice who are acceptable to quite a few people but hardly anybody really feels strongly about them, while looking for a broad consensus in society. Compared to electoral methods that rank candidates or force voters to grade candidates, it is significantly simpler and does not require the voter to be absolutely oriented among all the options. This also makes it less susceptible to manipulation and strategic voting. Simple and honest.

The basic assumption is that each voter always has more votes available than the number of winning options. All votes have equal weight, and the voter may or may not use them all. At the same time, only one vote can be cast for each option. The central principle of the method is the multiple-vote effect. This can be further strengthened in some elections by using the minus vote. The condition is that at least two plus votes are given at the same time. The number of plus and minus votes may vary according to the specific electoral situation. Modifications always occur according to a basic algorithm.

The minus vote reveals controversial options that may have many supporters but also many opponents. This also weakens extremism and results in a less divided society.

### D21 in Practice
The D21 – Janeček method has already been successfully used in Europe, America, Asia and Africa, especially in participatory projects in schools, cities and municipalities. One of the methods, and at the same time a new and rapidly growing trend in participatory democracy, is the implementation of participatory budgeting, in which individuals decide how to allocate part of the public budget. This can be implemented in municipalities and cities, schools and non-profit organisations.

Participace - Participation (from the Latin partem capere, to have a share) means sharing something, taking part or participating in something. Hence also to participate, to take part. Recently, there has been a lot of talk about how people should participate in all decisions that affect them. Participation 21 has already secured more than five dozen participatory budgets for Czech cities, more than 10 for European cities, and four participatory budgets for New York City. Hundreds of pupils in the Czech Republic and Slovakia have already voted using the D21 method in school "PBs".
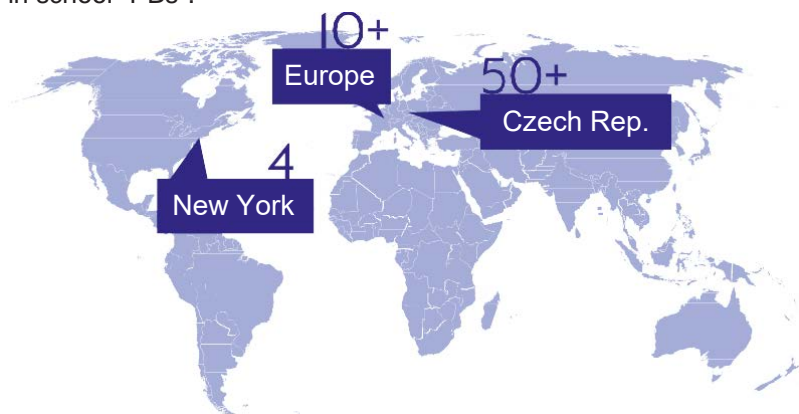


**What will the introduction of Janeček method bring to politics?**
- It prevents vote splitting between similar candidates
- It shows the support for individual candidates more accurately
- It promotes honest choice (you don't have to vote for the lesser evil)
- It disadvantages extremist candidates
- It weakens polarising candidates
- It helps to find consensus
- It motivates positive campaigns

# System Players

The electoral method does not only determine the winner. It also determines whether we choose a candidate that only some will be happy with, or one that almost everyone agrees on. Every coin has two sides, on one side, there is the electorate and on the other side, the candidates themselves. Everyone wants to win within the rules, and they will adapt their strategy accordingly.

The way we vote influences how best to behave in the "game" in order to be successful. Using the one-vote method, we only need to attract enough of the electorate. The option that is guaranteed to attract attention will often succeed. Tonight, we'll watch a bizarre horror film as a group and eat hamburgers, even though most people won't eat and will be disgusted by the film. Other people will split their votes between a variety of European cuisines and "normal" movies. If people can be more specific and have more voices, the choice may turn out very differently.

Electoral systems provide different incentives to please voters, and in each system a completely different strategy can be successful. If in the second round of the Senate elections, only 10% of eligible voters' support is enough to get elected, the winning strategy will be different than if many times more voters evaluate the candidate. The strategy changes if candidates speak only to their core constituency or if they have to reach out to other candidates' voters. The more people they speak to, the more they must provide solutions that are acceptable to a broader group, and the more they must offer a constructive agenda and limit attacks on their opponents. I will not attract voters of a different candidate by attacking him or her, but rather by highlighting my opponent's programme, which I agree with. The more votes available to the electorate, the more important the votes from the other candidates' voters are to the candidates, and therefore they must be more sensitive to the views of dissenting groups.

Just as the game of hockey has changed, the political contest may change as well. A more sophisticated, smarter and constructive one, one that we will be happy to play if the rules are changed properly.

## Olympic High Jump Champions
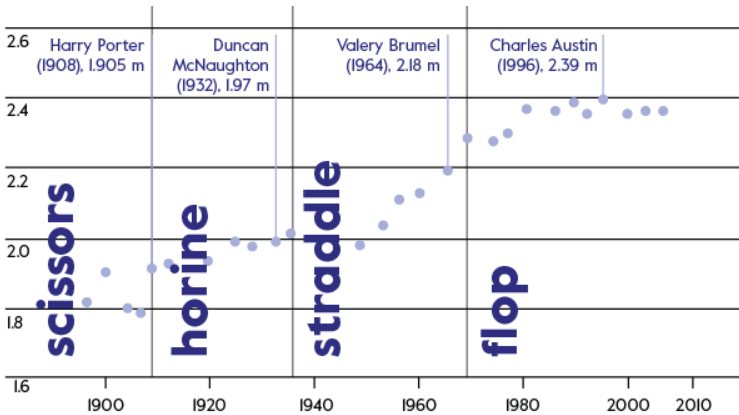


Even if the rules of the game do not change, the behaviour of the participants evolves anyway. They adapt, they improve, and what worked a few years ago may be an outdated strategy in a few years. In the high jump, the strategy has changed four times in the last 100 years, each time with a major impact on the results. With the same rules, we can play a completely different game.

# Society and Politics

### Changing Society

The rules change and players are constantly adapting and improving. Even rules that seem stable to us, that have always been identical, may have looked very different in the past. In fifteenth-century chess, the queen was the weakest piece on the board; from the sixteenth century onwards, she has become the strongest piece. Football as we know it today was separated from rugby in 1863, when it was forbidden to touch the ball with the hand.

Similar changes affect the way our society functions. In 1764, Cesare Beccaria published his essay 'On Crimes and Punishments', which fundamentally changed how society views crime and its prevention. In the 18th century, draconian punishments and torture of prisoners were the norm. Harsh punishments, little crime, one thinks intuitively. But Beccaria pointed out an interesting phenomenon. If the same (harsh) punishment follows crimes that have different harmfulness, there is nothing to prevent the perpetrator from causing a more serious crime that comes with a greater reward. If theft is followed by the same punishment as murder, what is to stop the perpetrator, if forced to shoplift for the survival of his family, from hurting the person who owns the store and will defend himself?

Beccaria's work challenges torture for confession, secret accusations, arbitrary discretionary powers of judges, inconsistencies in sentencing, clientelism and the use of the death penalty. The essay has inspired many thinkers in Europe and overseas. The work was so popular that in 1866 F. M. Dostoyevsky named one of his most famous works, Crime and Punishment. Less than a century later, Europe began to implement Beccaria's ideas, gradually abolishing torture and the death penalty. This meant a shift in society from the use of punishment to subjugate the population en masse to the use of punishment as a last resort and in a force that fit the crime.

*Changing the rules can have a profound and sometimes, at first glance, unlikely positive impact on the functioning of society.*

## The Decline in the Use of Torture in Selected Countries
*Source: Mannix, D. P. (1964). The history of torture. eNet Press.*



England
Scotland
Prussia
Denmark
Sweden
Czech lands
Austria
Italy
France
USA
Switzerland
Netherlands
Spain
Vatican City
Russia
Portugal

1625  1650  1675  1700  1725  1750  1775  1800  1825  1850  1875
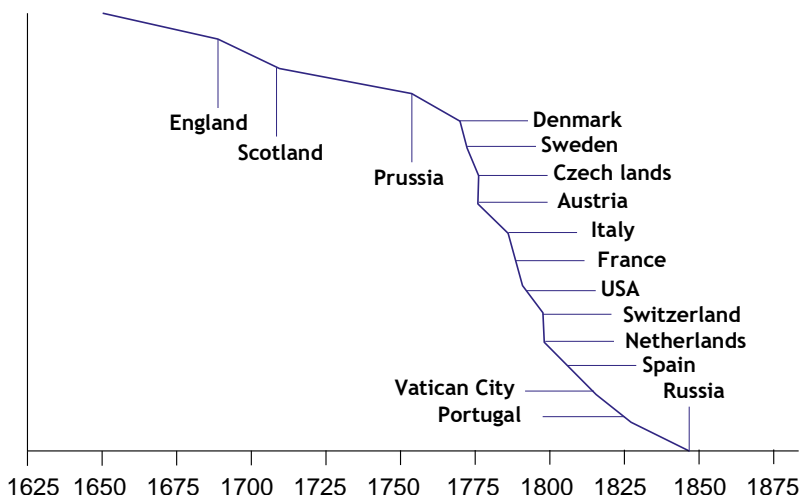
## Changing the Policy

Just as the use of other types of punishment can affect crime, the electoral system can greatly influence the political environment in which we live, and the direction of our society aims.

In the election of the President, the two-round voting system is the most widely used in the world, forcing voters to go to the polls twice and in many cases giving them the choice of the "lesser of two evils". The second most used system is the first-past-the-post method, which most experts agree is outdated and has a number of serious shortcomings.

Parliamentary elections are considerably more complex, but one thing most systems have in common is that they only allow voters to use one vote.

# The Presidential Election Electoral System

- Two-Round System (TRS)
- First-Past-the-Post (FPTP)
- Single Transferable Vote (STV)
- Other
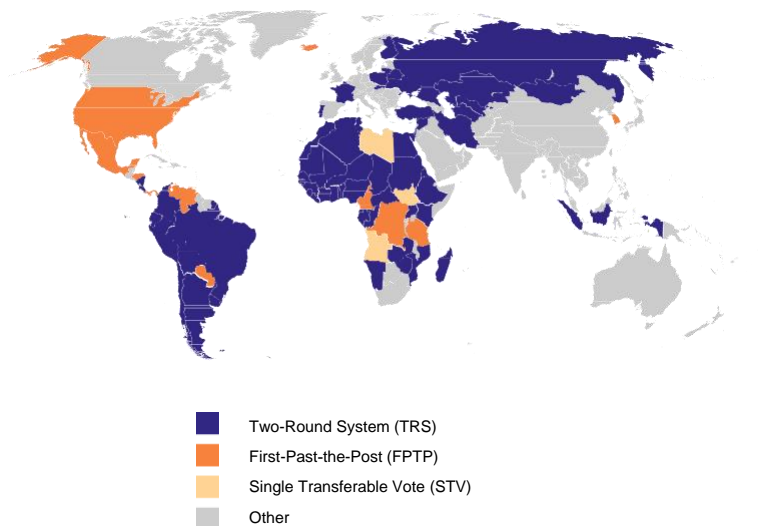
Around the world, there are a few exceptions to electoral systems giving the voter more options. In Australia, the Alternative vote (which allows candidates to be ranked, but only counts one vote at a time) is used for majority elections. Its alternative, but for proportional elections, is the Single Transferable Vote (STV) system in Ireland. The method was first proposed by Thomas Wright Hill in 1819 but did not see its first use until 1855 in Denmark. In 1857, the method may have been taken up, and perhaps independently introduced, by the English lawyer Thomas Hare, who rediscovered STV to strengthen the voice of individuals. Even the famous political philosopher John Stuart Mill (in his essay Considerations on Representative Government) was a proponent of the system.

STV was first used in the 1918 Westminster elections in Dublin, although only for the University constituency. The aim of the new voting system in Ireland in particular was to ensure proportional representation of both unionist (those who wanted to remain united with Great Britain) and nationalist (those who wanted separation) representatives. The system has been in use in Ireland since 1920.

In Australia, the Alternative Vote was adopted after a by-election in 1918 following the death of a representative in the Australian House of Representatives. The change came in response to the rise of a conservative Country Party representing small farmers. Its popularity divided conservative voters into two camps, allowing the Labour Party to win without a majority.

In the election, Edwin Corboy was elected (34.4%, he was also the youngest elected representative in the Australian Parliament until 2010). The votes of more conservative voters were split between the National Party (29.6%) and the Country Party (31.4%). The Conservative Party thus began to promote the Alternative vote as a means of allowing conservative parties to compete without necessarily allowing the Labour Party to win. Although Alternative vote has been used in some states in Australia, the change to the electoral system was not driven by considerations of which electoral system was appropriate, or how best to organise society, but only as a response to Edwin Corboy's unexpected victory. In the 1919 regular election, Corboy again had the highest preference, beating both Conservative candidates (in one-vote system). However, due to a change in voting method, the Country Party representative John Prowse eventually won.

*The electoral system can greatly influence the political environment in which we live and the direction of our society.*

## The Parliamentary Election Electoral System

*Source: International Institute for Democracy and Electoral Assistance*
*(International IDEA)*
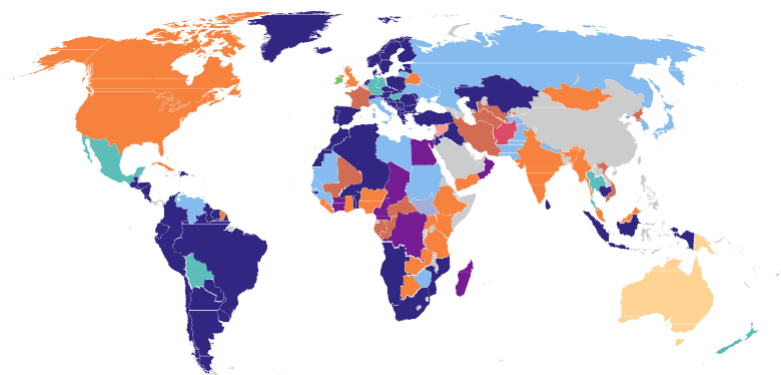


- Party-list proportional representation (List PR)
- First-Past the-Post (FPTP)
- Parallel system
- Two-Round System (TRS)
- Block Voting (BV)
- Mixed Member Proportional Representation (MMP)
- Single Non-Transferable Vote (SNTV)
- Alternative Vote (AV)
- Single Transferable Vote system (STV)
- Other systems
- No direct election

Interestingly, the conservative parties benefited from the introduction of the method until 1990. Although the change to the system was introduced for the wrong reasons, it was precisely in response to the shortcomings that single vote elections often cause.

Variants of alternative voting are used, for example, in the London mayoral election, where voters mark their first and second choices, or in the Sri Lankan presidential election, where voters are allowed to select their 3 preferred candidates.

In 2018, Fargo, North Dakota, became the first U.S. city to use the endorsement method to elect a representative. The change began 3 years earlier, when 6 people ran for council in an election and the winner received only 22% of the vote. With such a result, it is almost impossible to determine who would really be the best candidate if the people had a better say in the one-vote election.

The City Council responded, formed a task force to look into the election methods and ultimately recommended to the council the adoption of an endorsement vote. The Council ignored the results for over a year, but the people did not give up the fight. Jed Limke founded the public group Reform Fargo and pushed for the recommended solution, going house to house to tell the story of the ignored commission. Eventually, with the help of Fargo residents, the endorsement vote in the referendum was passed (64 to 36).

# Elections in the Czech Republic

In the Czech Republic, we vote in six different elections, which on average means more than one election a year. If we consider that the Senate and presidential elections have two rounds, this is more than 1.5 elections a year, and it has to be said that we are unfortunately not very interested in the second round of the Senate elections.
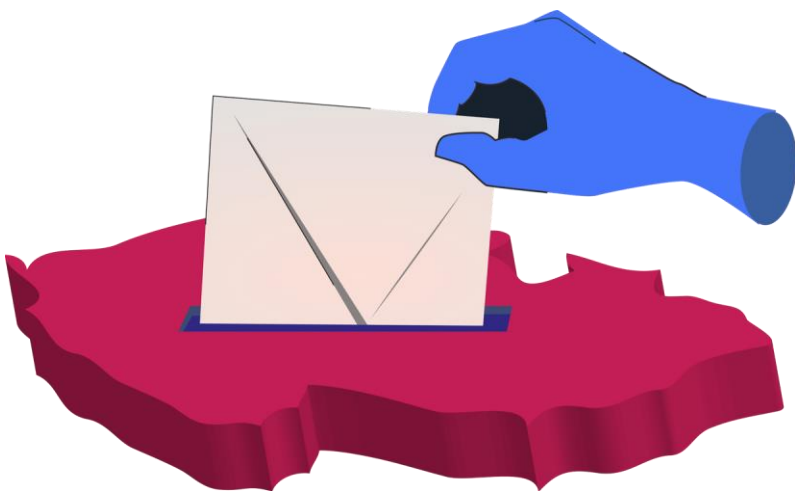


For the Senate and the presidential election, the majority voting system is used, i.e., winner takes all (there is only one President and in each of the 81 districts, just one Senator is elected). For other elections, a proportional electoral system is used, with multiple winners in each district, which should better reflect the distribution of opinions in the population. All elections, however, have one thing in common, we always use the one-vote system. What might elections look like if we could say more?

**Prezident 21**

Prezident 21 was an election game in which citizens could vote for presidential candidates. Thanks to the modern D21 - Janeček method, they had three plus votes and one minus vote compared to the real election.
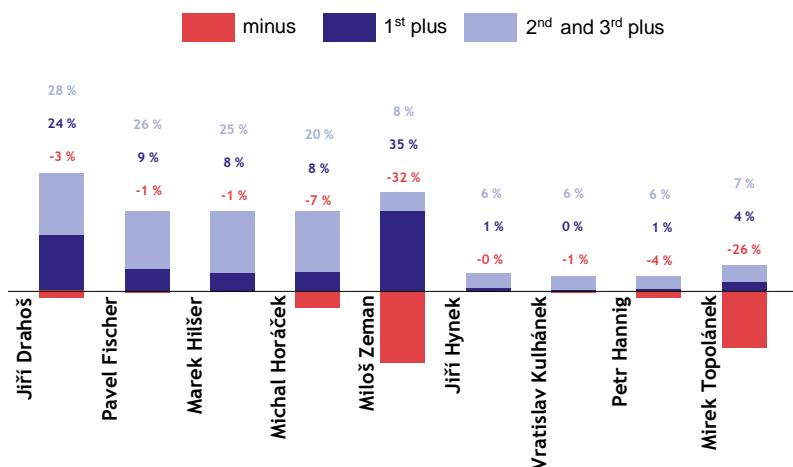
The Prezident 21 civic game started on 21 December 2016, when we started looking for candidates for the next President. In the first phase, people could nominate Czech personalities for the highest office. In total, they nominated more than 600 names! From 24 November 2017, the votes were distributed for real - only among the official candidates. In both phases, the D21 voting method was used - the Janeček method with multiple votes. The Game of the Castle ended with the first round of the real presidential election on 13 January 2018 and the winner was Jiří Drahoš.

The game itself was not representative in nature, it was meant to engage citizens in public affairs, to make them think about the candidates and the way they vote. However, based on a representative survey, we can estimate how people might vote if they had more votes or even a minus vote. By the one-vote count, Miloš Zeman was the clear winner with 35%, significantly beating second-placed Jiří Drahoš with 24%. However, if people could have voted with multiple votes and possibly used the minus vote, the result would have been fundamentally different. Miloš Zeman did not attract voters of other candidates and was able to gather the support of only 8% of voters in the second and third votes. On the other hand, Jiří Drahoš would have been voted for by another 28 % of voters, and Pavel Fischer and Marek Hilšer would have had almost the same increase. They are the ones who show great potential against real elections. They may not have been the first choice, but they have quite a lot of support in society.

The minus votes then helped to show the controversial election, which was especially evident with Milos Zeman, who was an unacceptable candidate for a significant part of the population, and also with Mirek Topolánek, who would be the only candidate to finish in the negative.

The election poll cannot show how the election would have turned out if a different electoral system had been used. The candidates would certainly have behaved differently, pursued a different strategy, and made different politics that would have been more acceptable to a broader group of the population. The poll found that Miloš Zeman had an ideal strategy for a one-vote election, with strong support from a segment of society. The way he is perceived by others is irrelevant in a one-vote election. But a multiple-vote election would push politicians to behave differently.

## Structure of Votes in D21 - Janeček Method



Legend: ■ minus  ■ 1st plus  ■ 2nd and 3rd plus

Jiří Drahoš: 28 %, 24 %, -3 %
Pavel Fischer: 26 %, 9 %, -1 %
Marek Hilšer: 25 %, 8 %, -1 %
Michal Horáček: 20 %, 8 %, -7 %
Miloš Zeman: 8 %, 35 %, -32 %
Jiří Hynek: 6 %, 1 %, -0 %
Vratislav Kulhánek: 6 %, 0 %, -1 %
Petr Hannig: 6 %, 1 %, -4 %
Mirek Topolánek: 7 %, 4 %, -26 %

### Senate elections

In 2014 and 2018, a series of parallel polls were conducted for the national elections. Of the 12 districts surveyed in 2014, 10 polls turned out the same as the one-vote election. Only in Česká Lípa and Zlín the results differed. In both cases, the accumulation of more votes was enough for another candidate to win. Candidates who came second in the one-vote election were able to garner support from a broader political spectrum.

In Česká Lípa, Jiří Vosecký won the Senate elections with 20.14% of the first-round vote. He advanced to the second round together with Karel Kapoun and eventually won the second round by 59 to 41. In the multi-vote poll, Karel Tejnora won the election, however, he did not even advance to the second round in real life with 15.94% of the vote. We can only assume whether the candidate with the highest support was indeed elected. In Zlín, František Čuba won the real election ahead of Alena Gajdůšková, but in the multiple-vote poll the result was the opposite. František Čuba finally resigned from the Senate on 28 February 2018 after not attending any Senate meetings since 2016. Then in 2018, in the 5 surveyed districts, a different electoral method did not bring any change in the results.

**Simulation of Local Elections**

In the empirical investigation of the 2014 municipal elections, then, in the fictitious election of a "mayor" from 13 districts, the multiple-vote option produced different results in 3 districts. This was once due to the effect of multiple votes and twice after counting the minus votes. Often, multiple-vote count will determine a different winner if the original winner is associated with some controversy, as was evident in this poll. In Liberec and Držovice, where more votes would have made a difference, the winning candidate was accompanied by a scandal that was often perceived negatively. On the other hand, if a candidate has sufficient support, controversy is not a bad thing, as was demonstrated in Teplice, where Jaroslav Kubera won. This was despite the fact that he received the most minus votes and was the first choice for almost all of his voters, thus failing to attract the voters of other candidates.

A different electoral system is not intended to pick a different winner; in most of the elections examined, the result was the same. In cases where a different winner is chosen, it is important to ask why. Most of the time it was just because the candidate was unacceptable to voters other than their own; he or she was not able to unite society, but instead divided it.

# Change is Possible

Society seems to be increasingly divided, with people struggling to find common ground on political issues outside their opinion bubble, having a hard time in their own neighbourhoods, and even harder with people they don't know directly (and may not even want to know). Politics has become significantly polarised and the moderate centre has no representation. The public space is dominated by conflicting opinions that do not mute each other, but on the contrary reinforce each other. Internet spammers feed us content we may not want to see, we may not agree with, but it keeps our attention. Radical, extreme, shocking, as long as it isn't boring. In this environment, we vote with a system that amplifies the whole process and discourages consensual candidates. A one-vote choice rarely ever makes sense, reduces human opinion to its lowest possible level, encourages polarization in society, and discourages many of the candidates we might all agree are best. It often forces people to vote insincerely between candidates they

think have a chance of success. Real preferences, real politics, value and quality are often put aside, and the choice is often reduced to the better of two bad options. In a well-functioning democracy, we should not vote for the 'lesser of two evils'.

Some voting methods encourage voters to lie when voting, candidates to divide society, and other new candidates to be discouraged. Others allow us to vote honestly without fear of losing our vote, show how much support candidates really have, motivate us to do more, encourage a plurality of views and, above all, better reflect our society.

Expecting constructive dialogue and agreement in such a polarised system is like expecting a pass from the other team in a hockey game. Cooperation does not pay, on the contrary, it is punished. In a one-vote election, cooperation means that you join forces but divide the electorate. Since they don't have more votes available, they can't appreciate the deal. Often, even when voting for the most beautiful bride on the internet or the best computer game of the year, we have a better tool at our disposal than when voting for our political representatives.

There is no one best voting system that will save the world. Each system can determine a different outcome and sometimes it is difficult to compare what the "right" solution is. It always depends on the specific conditions and the goal the electoral system is intended to achieve. But there are objectively worse and better ways of voting for our representatives and not fighting to the death as a society. The art of getting along usually requires compromise so that everyone can be at least partially satisfied. And agreement is hard to come by in an environment where people cannot even suggest that their second or third choice is actually acceptable to them, where opinion is reduced to a single ballot with a single name.

The electoral system is one of the foundations of our democracy, but it is not immutable. Throughout history and in the present day, electoral systems have been changed to make society more stable and prosperous. In Venice there was an effort to eradicate corruption, in the election of the Pope there was an effort to reach consensus as quickly as possible, in Ireland there was a need to

hear both sides of the debate about the future direction of the country, and in Fargo in the US the people were unwilling to accept that the winner of the election would have the support of only 22% of the electorate.

When hockey began to turn violent on skates, all it took was a slight tweak to the rules and the game became attractive, combative but fair again, as it was always meant to be. Equally, we should be very sensitive to developments in our society and prevent change from happening too late or not at all.

The political scene can be more sophisticated, the election campaign can be conducted positively, and the pre-election dialogue can be constructive. Candidates can highlight the strengths of their opponents and take some of their ideas on board, but they must be properly motivated to do so. It is hard to blame politicians for a lack of constructive dialogue when the system itself forces them not to act in such a way. Often it is in their best interests to create conflict rather than to settle it.

That is why the electoral system or voting method that we use to elect our representatives, and indeed any time when more people have to come to an agreement, is so crucial. The electoral system is the skeleton that holds our collective decisions together. It's a map that helps us choose a direction when we don't know where to go next. It is the rules that determine what kind of game we play. And when we change the rules, we change the game.

**Institute H21 Research Department**

*We are well aware that changing the rules is a task for enlightened minds. That's why our Research Department is doing its part. D21 – Janeček method is subjected to statistical analyses and models. The main task is to compare its strengths and weaknesses with other electoral methods. Thousands of people have used the Janeček D21 method in pre-election research with a representative sample.*

*https://www.ih21.org/en/d21-janecekmethod*
*research@ih21.org*