



UNIVERSITY OF BERGEN

Department of Economics

POLØK250

Bachelor Essay in Political Economy

Electoral Implications of the Rational Choice Theory

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Electoral Implications of the Rational Choice Theory

Rational Choice Theory implies that every individual has a rational side, which is capable of making consistent choices (Downs 1957). It is at the core of most economic models, and has gained traction in its application to models of political science. Since its conception it has been criticized for both the scope and requisites of its assumptions, and especially methodological failings in the areas it has been applied to (Green and Shapiro 1994). At the core of the theory, it is assumed that actors are rational at least to the extent that they make choices that will maximize their utility.

In this paper I seek to clarify what rational choice theory is, as well as examine how the assumptions present in the theory affect its implications for voter-turnout. I will use elections, an area where the theory is often applied, to examine what factors determine the choice of whether to vote or not. I seek to answer the following question:

“What factors are most prominent in determining voter-turnout in large elections?”

Rational Choice

The academic field referred to as rational choice theory is very extensive, and the name itself does not limit it to the domain of politics, economics, psychology, or a combination of the three. As Fiorina points out: “[Rational Choice] today is not a monolithic movement [...]”, but most “presume that individuals behave purposively” (Fiorina 1996: 87). Following Lohmann, I will take the view that it is “[...] a theory about the behaviour of instrumentally rational and self-interested individuals [...]” (Lohmann 1996: 132), adding: Who rationalize their choice of whether or not to vote, in accordance with their potential utility of doing so.

Three terms need distinction: The theory of rational choice, rationality, and rationale. In this paper I mainly discuss the implications the theory has for large political elections, and thus limit its predictive power to that field. This relates back to a point by Friedman: The use and definitions of the rational choice theory is as variable as most theories in social science, and should not be regarded as a grand theory (Friedman 1996: 13-14). That is to say, the version I am presenting here may weigh factors differently than other variants of the rational choice theory, and certainly has no universal predictive power.

Kahneman writes: “Rationality is logical coherence – reasonable or not” (Kahneman 2011: 411), implying that to be rational is to behave consistently, regardless of whether the choice taken stems from instinct or thought out reason – what he calls system 1 and system 2, respectively (Kahneman 2011). From this I define rationality as: “Making choices that are consistent with ones preferences, given the constraints one faces”. In this context constraints are the threshold for whether the actor is willing to make the choice, in that the benefit exceeds the cost of doing so. Hence, a rational choice is one which the individual perceives as not being inferior to any other feasible alternative.

I separate rationale and rationality, and define the former as: “The rationality of a single individual”, as I am discussing rationality as it applies in general terms, and the variations in rationality between different individuals. Rationale is determined exogenously, in the sense that ethical, moral, or other justifications are done by each individual and not necessarily revealed to the voting population. Stanovich (as referred to in Kahneman 2011: 48-49) differentiate rationality from intelligence, making it a system of realizing preferences through choice, not intellectually justifying the choices. The distinction is important as a vote for a political candidate does not need to be intellectually explained, but should have some utility for the person placing the vote.

Utility

Inherent in rational behaviour is maximizing utility, in that rational individual’s do cost-benefit analysis (Elster 2007: 193-196) before making a choice: They consider the gained benefit of a choice relative to the cost of it – also known as the utility gained. To make such an analysis, or at least be aware that it is made, the individual must be cognitively aware of the choice, which is the reason for measuring behaviour, the outcome of the choice, rather than beliefs, the justification of the choice.

Given a set of preference-orderings – preferences ordered by utility yielded – a rational actor will choose the preference that yields the highest utility, relative to the cost and benefit. For example, a person who prefers green apples that cost \$5 per kilo to red apples that cost \$4 per kilo would be rational, in that the benefit gained from green apples exceeds that of the benefit gained from red ones – even despite the higher price.

In addition to cost and benefit, I use the concept of duty to explain utility gained intrinsically from voting (Feddersen and Sandroni 2006: 1272). This in the sense that civic-mindedness, or the utility gained from acting in such a manner, may in many cases surpass the utility gained from voting for personal political or financial gain. As Blais writes: “[F]or many people voting is not only a right, it is also a duty.” (Blais 2000: 113). Altruism may also play a part here (Feddersen and Sandroni 2002: 8), in as much as duty may be viewed as a cost and altruism as a benefit: In this sense, voting for altruistic reasons gives a gain in utility from participating in civil life, whilst voting as a duty avoids a cost to the individuals’ sense of civic-mindedness. Both take the view that voting is of societal gain, but they are motivated differently.

Preferences

I use Feddersen and Sandroni’s concept of consistency, which “links agents’ preferences with actual behaviour in a manner analogous to Nash equilibrium” (Feddersen and Sandroni 2002: 2). That is, their concept of consistency focuses on behaviour in the form that it leads to situations where preferences are stable between actors, because they make assumptions about other actors’ preferences when deciding their own. In this sense preferences are determined endogenously, and actors thus adapt to what they perceive other actors’ decisions to be (Feddersen and Sandroni 2002: 4-6). They specify: “[I]f agents’ behaviour is consistent then there exists a cut-off point for each type such that agents with voting costs below this threshold should (and will) vote [...]” (Feddersen and Sandroni 2002: 5), implying a specific maximum cost for each voter that determines whether or not he should vote. Consistent behaviour then implies that choices are to some degree stable over a temporal dimension, as well as measurable.

There are limits placed on the degree to which any given individual can realistically make rational choices, and implicit in maximizing the utility of a given set of preferences is that the actor’s choices can be ordered, and that they can be realized within the constraints faced. This involves a minimum level of cognitive ability, wherein this individual has some desire to change or maintain the status quo through voting, or alternatively abstain from voting. Lastly, that the individual in question is physically capable of going to a voting-booth and placing the vote.

Having defined the key-terms, we may define a set of conditions that must hold for rationality to be present in any given individual actor. These are expanded below, but for clarity are defined as (Gerrard 1993: 88-89):

- A. Completeness: The actor knows his or her preferences for the possible outcomes of the available choices.
- B. Reflexivity: The available choices do not include irrelevant choices, and hence introducing a new, independent choice will not change the previous preference-ordering.
- C. Transitivity: The actor orders preferences by utility, in the form of preferring A to B to C, and is not indifferent between them.

Completeness

The actor must be able to distinguish the given utility between preferences at least to the degree that “he prefers the first to the second, prefers the second to the first, or is indifferent between them” (Elster 2007: 194). This relates back to the criterion that the actor must be cognitively capable to make the distinction between available choices, as well as economically fluent to assess the utility that each choice will yield. For example, if the actor is indifferent towards green, red, and yellow apples – of the same quantity and quality - then no clear preference-ordering will arise, as their utilities are judged as equal. Even if the apples yield different utilities after the actor has made a choice, the expected utility beforehand determines the choice.

Reflexivity

This condition ensures that the actor has considered all the possible, and thus relevant, choices available to him. That is to say, he excluded any choice that was deemed irrelevant due to unavailability, preferential conflict or inferior to similar options. For example, if a person prefers green apples over red ones, but distinctly has no preference towards yellow apples, then considering yellow apples would not be a relevant choice.

Transitivity

To exemplify the transitivity-criterion, we might imagine a person who prefers x to y , and y to z , giving the preference-ordering $x > y > z$, where these three variables are abstract choices available to this person. By definition, obtaining x would yield the highest utility, and preferring y to z implies that the actor prefers x to z as well (Elster 2007: 193-196). This condition is necessary for consistency to exist within the preferences. If the actor preferred z to x he would not be able to make a definite choice to which of the three options yielded the higher utility, and therefore endlessly cycle his preferences.

Observable entities

There are definite constraints on what may be measured, in as much as behaviour and intent are distinctly different concepts. As Dowding suggest, “desires motivate whilst belief channels the action”, where “an individual who desires z will do y because of her beliefs x” (1991: 23). In this sense, desires are preferences, and could realistically only be quantified through questionnaires that map these preferences. Belief would be intent, and cannot be quantified as it is buried within the psyche and the expression of this intent cannot be verified by an external actor. However, actions, or behaviour, can be quantified to the degree that the results of choices made can be seen and verified by external actors.

For example, in a country with open ballots in elections, it would be possible to see what an individual voted each election, but the reason given may change, and the actual reason may never be revealed. So to measure rationality with some degree of certainty and verifiability, we should measure behaviour.

Social Choice

A social choice is a choice made by a society of individuals, in the sense that their common preferences express a choice that this society would desire if their individual preferences were aggregated to group-level. I will use the model developed by Feddersen and Sandroni (2002), who define a group of “rule-utilitarians”, whose preference it is to maximize social welfare through acting as a group (Feddersen and Sandroni 2002: 3). In this sense, the duty part of voting has value because it fulfils a duty to the group, as well as an altruistic value from helping the group. We assume that the voting population is sufficiently large to the point where a single vote would not decide the election, as well as actors having preferences that are sufficiently heterogeneous for there to be support for both candidates.

Other methods are available to predicate the outcome of an election, such as the median-voter theorem (Rowley 2003: 382-387), but I choose to examine the strategic approach as it illustrates how rationality plays a part in elections. A pitfall of this is that I am not assessing “hard” empirical data such as questionnaires or observed behaviour, but am predicting what choices these actors should take given a rational outset, and then assuming variation from other

explanatory factors. This, admittedly, is an idealistic outset and view on elections, but nonetheless useful in terms of exploring incentive- and preference-structures that exist before and during a vote is cast.

Issues

As Lohmann points out, placing collective dilemmas in a paradigm of a prisoner's dilemma creates a false illusion of limited choice (1996: 132-145). If viewed as a two-player game, where each player decides whether or not he should vote, then "a pure strategy equilibrium may not exist [...]" (Feddersen and Sandroni 2002: 29), which in the context of a social choice implies that voter-turnout does not equal cooperation. The contention being that social choices are not necessarily made strategically within the social groups ahead of an election, but could as likely be a result of long-term sequential games of choice where the group reaches a consensus. There is also a factor of leadership and hierarchical structure, in the sense that groups who vote alike could be persuaded both to vote and whom to vote for by members of varying positions within the group – a similar structure to a political party.

The choice of whether to cooperate or defect in regards to social choice manifests not just attempting to elect a candidate, but also the relationship with the group. For example, a person who does not follow the group rule – that is votes as the group votes – could potentially lose favour with the group, as well as the utility from voting if the candidate loses.

The Paradox of Voting

Voter-turnout is rarely explained just by the gain in benefit from voting, or by duty alone, but rather a combination of explanations. For example, a voter may deem it beneficial to his community to spend hours in queue, money on transport, and lose a potential work-day, to cast his vote in favour of a party that would benefit this community or satisfy his desire for ideological change. The benefit from voting may take various forms, such as political, financial, fulfilment of civic-duty, or some undefined other. The cost imposed would here be the time, resources, and possible loss of benefit that could be gained from other activities. What matters is that the actor has a gain in utility.

The paradox of voting refers to the situation where the voter is aware of the number of other possible voters, the electorate, and judges his utility weighed by the likelihood that all or some of

the other voters vote as well – diminishing the effect his single vote has (Feddersen 2004: 102). If this rationale were applied to all voters, then it would be irrational for all of them to vote. In turn, if none of them voted the rationale would turn again, giving all of them incentive to vote as the marginal utility of doing so would increase (Geys 2006: 22). Paradoxically, and demonstrably, many people do vote (Matsusaka and Palda 1999, Coate and Conlin 2004: 1485-1486), and hence the simple explanation of rational choice needs to include different explanatory variables.

Who votes?

In the context of collective social choice, the voting-process may be viewed as a collective strategic game, where each player has not only similar, but near-identical information about the world and each other. In this situation, the voting paradox would predict a low utility-gain from voting on an individual-level, but rule-utilitarian's act as a group, and can be assumed to gain utility if their candidate is successful.

When translated into votes for a political party, the voting population as a whole cannot possibly maximize each individual actor's preferences. This stems from the transitivity-criterion, which is necessary with a composite of multiple actors with different preferences. We might imagine a scenario with an abstract amount of voters, each of whom meet the transitivity-criterion individually, but when their preferences are aggregated the criterion fails because a situation where an equal amount of voters prefer $x > z$ as prefer $z > x$ can arise, assuming that each of these actors vote. However, as I explain below, this situation is unrealistic.

Model

Firstly, we imagine a general election held at a national level, with more than one candidate or party running for office. Secondly, there are more than two members of the electorate voting in this election, such that there is no situation with a pivotal vote. Thirdly, the members of the electorate are assumed to conform to the bounds of rationality previously specified. As should be apparent, this model presumes that the election is democratic and thusly cannot make predictions about dictatorial elections or elections where voters do not meet the conditions for rationality.

An important thing to note is that no large election, with the amount of voters ranging from thousands to millions, is every likely to achieve a situation with a pivotal voter. This is simply because there is sufficient variation in preferences, benefits, and costs to ensure that the chances

of a perfect division of voters occurring are insignificant. Additionally, many political systems make the situation less likely by implementing electoral systems such as the US electoral college, where a nationwide popular vote can be surpassed by the vote of the electoral college (Bennett 2006: 1-3). This situation would be even more unlikely in a multiparty-system.

Predictions and results

Coate and Conlin (2004) employ a derivative of the aforementioned model, and examined turnout in Texas liquor referenda from 1976 to 1996 (2004: 1484). Though varied in size and with presumably lower turnout than national elections, the results are analogous to them. Like a national election with two candidates, referenda mostly have three choices: Vote for, vote against, or abstain. Their approach focuses on how groups work to deliver votes, and each individual member receive utility from participating in this activity – gaining utility from doing their duty to the group.

Three differences are of note from their use of the model as compared with that of Feddersen and Sandroni (2002): The group voting for each candidate “may differ in the intensity of their preference”, the amount of each group who votes by duty is non-random, and it is assumed that – all things equal – people always vote from duty (Coate and Conlin 2004: 1479). Thusly, voting in groups is done to maximize the utility of the group, not society as a whole.

Their findings are numerous, but in relation to this paper some are of note: The turnout for each election varied substantially, the votes tended to be close, people were more likely to vote on a weekend, and predicted turnout strongly correlated with actual turnout (Coate and Conlin 2004: 1486-1494). With the reservation that the votes were for liquor referenda, it appears that group rule-utilitarianism has some value in explaining voter-turnout (Coate and Conlin 2004: 1495-1496).

Implications

One clear problem with viewing elections purely from a rational actor model, wherein the actors only consider cost and benefit in terms of personal gain, is that such an outset would largely confirm the voting-paradox. Preferences for ideology would be defined mostly in economic terms, and preference-cycling could be a reality.

Adding duty and altruism to the model creates more variability in personal gain, and also creates a situation where societal gain takes part. However, each examined election might prove to be sufficiently varied and distinct, to the point that neither duty nor altruism plays a significant role in the election in question. Essentially, personal utility – such as personal economic gain – might be of bigger importance, and hence be the determining factor for the decision to vote. This applies to all external factors, such as the weather, whether the vote happens on a weekend, etc.

Duty, and to some extent group-altruism, should be seen as structural characteristics of elections: The expected utility of voting, in terms of personal gain, can vary as much as the economic and political situation in the country, but the utility gained from performing this duty for society should remain stable over time (Feddersen 2004: 107, Coate and Conlin 2004: 1497, Geys 2006: 18-20). Duty could appear to be more of a constant in some cultures, and thus be more stable than the impact of ideological change on the utility of the individual, in regards to turnout.

For example, we might imagine a presidential election in the United States of America, where two candidates are close to the middle, but sufficiently distanced from each other, politically. The incentive to vote might here be low, in the sense that the candidates political agenda is similar, and the political outcome thus would not be much different if the preferred candidate won over the less preferred one. However, even though political incentives are low, people may vote out of duty to uphold democracy (Geys 2006: 18-19).

In another situation, where one candidate clearly has a leftist-ideology and the other a rightist-ideology, some voters may favour higher utility from having more money, and hence vote for the candidate offering lower taxes. Another group may prefer more social redistribution, and vote for the opposing candidate. The possible variations in preferences; be they for policy outcomes, personal gain, avoiding societal or group costs, or any other goal yielding utility, can possibly yield any number of outcomes in turnout – and so we should focus on those factors that universally are more likely to be of significance.

Preferring lower taxes over social redistribution does not necessarily imply a desire for personal economic gain, but could stem from a belief that a small government is better than a large one. The inherent ambiguity in determining which factor is at play for which actor in a given election makes it empirically difficult to ascertain why the turnout of one election was different from

another, both having the same populace. In the example of voting for ideology, it would be reasonable to assume that in some elections the ideological position of the available parties or candidates would be of greater concern for the majority of voters.

Conversely, this very assumption could prove to be an illusion for the observer: In the sense that ideological differences appear to be the reason that the population is divided around whom to vote for, the reality could be that voting is done without preference for changing or maintaining the current policies, but more so because of a group-mentality. From this point we can posit that uncertainty about reasons leading to behaviour can lead to uncertainty about which factor takes precedence in the examined election. Hence, a host of factors – from the political, to the economical, to the psychological – need to be considered when predicting turnout for a given election, all of which are context-dependent and can reasonably be assumed to vary between elections.

Since people should vote when their utility exceeds their cost, and both duty and altruism are hard to quantify, it follows that the exact threshold for voting varies greatly between people. Suffice it to say, determining how significant each factor is in the choice can be a hard task when some factors are hard to quantify. Nevertheless, each rational actor has a consistent set of preferences, a stable threshold of costs and benefits, and some amount of duty or altruism, that defines whether this actor should vote in a particular election.

Conclusion

The decision to vote seemingly depends on a number of factors, including preferences, costs, benefits, opportunity, duty, and altruism. But determining an aggregate prediction for a population about whether or not they should vote is more difficult if these factors can change between elections and vary across electorates. In this paper I have shown how the use of rational choice theory is justified when explaining voter-turnout and discussed difficulties with using the theory for predictions. The decision to vote and whom to vote for is hardly an arbitrary one, and thus considering rational reasons for doing so is a worthwhile pursuit.

The difference between voting for societal gain and voting for the gain of a group to which the voter belongs should be of special note, as this is an area where preference- and incentive-structures could be explored further.

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