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### Understanding political behavior: Essays in experimental political economy

Gago Guerreiro de Brito Robalo, P.M.

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# Summary

Understanding political participation is one of the big challenges in the social sciences. Whenever they are called upon to intervene in political affairs, individuals face a dilemma: on the one hand, a desire to participate - to vote, protest, campaign, or speak out; on the other hand, a propensity to be “left alone” and let others take responsibility and bear the costs of the political process.

This thesis explores how non-standard preferences (Chapters 2 and 3) and decision making biases (Chapter 4) might influence the decision to participate and the optimality of political choices, respectively. The standard models in political economy have mirrored the central tenets of the neoclassical or rational choice view, namely self-interested preference orderings and full rationality (Rowley et al. 1993 ). This paradigm has yielded substantial insights into the political process. However, some phenomena seem to elude the paradigm, chiefly among them the inability to fully explain individual political participation. This thesis aims at extending the rational choice model by providing directions in which its microfoundations can be enriched. The final goal is to increase its explanatory content and predictive power. Despite looking for new directions to improve the microfoundations of political economy models, the work in this thesis retains the economic approach’s conventional techniques. All chapters use a combination of theoretical models and laboratory experiments. Primacy is always given to what can be learned from the experimental data - the models are developed to the extent that they can make predictions regarding what to expect in the laboratory.

Chapter 2 deals with the effect of group identity and altruism on the decision to participate and is based on joint work with Arthur Schram and Joep Sonnemans. When groups with diverging interests settle their disputes via democratic politics, which is the case in *any* election, the allegiances each individual has to the group should matter for his decision to participate. More broadly, how much more she cares about an individual of her group than an individual of the other group should determine her willingness to endure the costs of participation. In fact, group identity seems to be a driving force of participation: in the United States, African-americans

participate at higher rates than their socioeconomic status would predict (Leighley and Vedlitz 1999). This constitutes a puzzle because socioeconomic status is typically the best predictor of individual political participation. One of the candidate explanations for this puzzle is a heightened sense of group identification. However, field data makes it extremely hard to identify the causal effect of group identification per se on participation, as it evolves concomitantly with mobilization and socialization processes. A laboratory experiment grants us the control necessary for this investigation.

In the laboratory, each participant is part of a group, which interacts with another group in simulated elections (the participation game of Palfrey and Rosenthal 1983). Using a novel procedure, we manage to induce different levels of group identification in the experimental treatments. Based on the theoretical results and the extant evidence, we hypothesize that both individual and aggregate participation should be increasing in the level of individual group identification and treatment-level group identity, respectively. Concurrently, our experiment also allows us to test whether individuals with more altruistic preferences tend to participate more often. At the aggregate level, no pronounced differences in participation are observed between high group identity and low group identity environments. At the individual level, there is a modest effect of group identification on participation. A more robust effect is found for non-group-specific altruistic concerns. This is in line with the altruism theories of voter turnout (e.g. Evren 2012). A by-product contribution of this study is methodological, as we propose a procedure that manages to induce different levels of group identity in the laboratory without resorting to natural groups.

Just as much a concern for others is a reason to participate, having been asked by others do to so also seems to work. A large field experimental literature (spanned by the seminal work of Gerber and Green 1999), has showed that certain mobilization tactics (like door-to-door canvassing) are successful in increasing turnout. However, other mobilization tactics, like mass mailings, are largely ineffective. The question remains as to what drives people to respond to mobilization efforts. Chapter 3 investigates the psychological mechanism underlying this phenomenon. The starting point is the observation that all mobilization efforts involve both a material effort and a normative appeal (to participate). The effect of mobilization on participation could then work either via reciprocity concerns, i.e. participation as a token of appreciation for the material effort of mobilization; and/or via compliance with normative appeals, i.e. participation in order to avoid the disutility associated with violating the participation norm that mobilization makes salient.

The laboratory election framework of Chapter 2 is extended to allow for both participation and mobilization. The experimental treatments consist in varying the mobilization method (human-driven, by group leaders, or automated) and the normative appeal conveyed by the mobilizing subject to others in the same group (present or absent). The main results show that the normative appeal is successful in increasing participation, in particular when it is coupled with a mobilization effort. Mobilization alone is not enough to increase participation, which disconfirms the reciprocity conjecture. I also carry out an assessment of the model's point and comparative statics predictions, and conclude that the behavior of group leaders is not in line with the point predictions, while most comparative statics results of the model seem to hold.

Information is a crucial determinant of good decisions, be they individual or collective. Chapter 4, which is based on joint work with Rei Sayag, proposes a first approach to the question of whether the costs of information affect the way it is incorporated in decision making. The findings are potentially relevant for two well-known and related results in political economy: rational ignorance and the Condorcet jury theorem.

The literature dealing with these topics, as most of the literature on individual decision making, assumes that information is incorporated in individuals' judgments via Bayes Rule. It is further assumed that Bayes rule is applied irrespective of the cost of information. In our study we ask whether this presumption is legitimate. We construct an individual decision making task under risk and vary the way in which information is made available to subjects: for free, optionally at a cost or imposed at a cost. The laboratory allows us to circumvent the problematic selection issues present in the field, where the subjects who acquire information are the ones most likely to benefit from it. We find that the assumption that Bayesian updating does not depend on information's cost should be questioned: subjects weigh more heavily both the signals they choose to acquire and the signals that they were forced to acquire. In sum, costly information is given a higher weight than free information, which leads to more extreme moves in posterior beliefs. Whether this results in more optimal decision making depends on how far the posterior under free information lies from the normative optimum. In other words, if a decision maker is not using information to the extent prescribed by the normative model, letting her buy it or make her pay for it is likely to lead to a better outcome.





# Samenvatting (Summary in Dutch)<sup>1</sup>

Het begrijpen van politieke participatie is een van de grote uitdagingen in de sociale wetenschappen. Wanneer men wordt opgeroepen om deel te nemen in politieke zaken, worden individuen geconfronteerd met een dilemma. Aan de ene kant een verlangen om te participeren - om te stemmen, te protesteren, campagne te voeren of om zich uit te spreken; aan de andere kant is er een neiging om 'alleen gelaten' te willen worden en anderen de verantwoordelijkheid te laten nemen en de kosten van het politieke proces te laten dragen.

Dit proefschrift onderzoekt hoe niet-standaard voorkeuren en afwijkende ('biased') besluitvorming participatie en de optimaliteit van politieke keuzes kunnen beïnvloeden. De standaard modellen in de politieke economie weerspiegelen de grondbeginselen van het neoklassieke uitgangspunt, namelijk eigenbelang en volledige rationaliteit (Rowley et al. 1993). Dit paradigma heeft veel inzicht gegeven in het politieke proces. Maar sommige verschijnselen lijken niet binnen het paradigma te passen. In het bijzonder heeft dit paradigma het moeilijk om individuele politieke participatie te verklaren. Dit proefschrift richt zich op het uitbreiden van het rationele keuzemodel door nieuwe richtingen aan te geven waarmee de microgrondslagen van het politieke gedrag kunnen worden verrijkt. Het uiteindelijke doel is om de verklarende en voorspellende kracht van het model te vergroten. Bij de zoektocht naar nieuwe manieren om de microgrondslagen van de politiek economische modellen te verbeteren, blijft het werk in dit proefschrift gebruik maken van technieken die binnen de economische benadering gebruikelijk zijn. Alle hoofdstukken gebruiken een combinatie van theoretische modellen en laboratorium experimenten. Voorrang wordt steeds verleend aan wat geleerd kan worden van de experimentele data - de modellen zijn ontwikkeld om zo goed mogelijk te voorspellen wat er verwacht kan worden in het laboratorium.

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<sup>1</sup>Deze samenvatting is tot stand gekomen met behulp van Boris van Leeuwen, Jozefina Milanovski en Arthur Schram.

Hoofdstuk 2 gaat over het effect van groepsidentiteit en altruïsme op de beslissing om te participeren en is gebaseerd op gezamenlijk werk met Arthur Schram en Joep Sonnemans. Wanneer groepen met uiteenlopende belangen hun geschillen beslechten via de democratische politiek, zoals bijvoorbeeld het geval is bij verkiezingen, dan zou de loyaliteit van een individu aan een groep van invloed kunnen zijn op de beslissing om te participeren. Meer in het algemeen zal de bereidheid om de kosten van participatie te dragen mede afhangen van de mate waarin men meer geeft om iemand uit de eigen groep dan om iemand uit een andere groep. In de praktijk lijkt groepsidentiteit inderdaad een drijvende kracht achter participatie te zijn; in de Verenigde Staten, bijvoorbeeld, is participatie onder de zwarte bevolkingsgroep hoger dan op basis van sociaal-economische status te verwachten zou zijn (Leighley en Vedlitz 1999). Dit wordt gezien als een raadsel, omdat sociaal-economische status normaal gesproken de beste voorspeller van individuele politieke participatie is. Een van de mogelijke verklaringen voor dit verschijnsel is een verhoogd gevoel van groepsidentificatie onder de zwarte bevolking. Het is echter uiterst moeilijk om het causale effect van groepsidentificatie op participatie te identificeren op basis van data uit het veld, omdat het gelijktijdig evolueert met mobilisatie en socialisatie processen. Een laboratoriumexperiment geeft ons de noodzakelijke controle over de situatie om dit te onderzoeken.

In het laboratorium is elke deelnemer lid van een groep, die samen met een andere groep deelneemt aan gesimuleerde verkiezingen (het participatie-spel' van Palfrey and Rosenthal 1983). Aan deze laboratorium verkiezingen voegen wij de mogelijkheid toe dat men preferenties heeft die waarde toekennen aan hoe het met de anderen in de eigen groep gaat. In het experiment slagen we erin om verschillende niveaus van groepsidentificatie te induceren. Op basis van theoretische analyses en eerder empirisch onderzoek, veronderstellen we dat zowel individuele als geaggregeerde participatie toeneemt met de mate van respectievelijk de individuele groepsidentificatie en het niveau van de genduceerde groepsidentiteit in de verschillende experimenten. Tegelijkertijd biedt ons experiment de mogelijkheid om te testen of individuen met altruïstische voorkeuren vaker participeren. Op geaggregeerd niveau vinden we geen verschil in participatie tussen omgevingen met een sterke of zwakke groepsidentiteit. Op individueel niveau vinden we een bescheiden effect van groepsidentiteit op de mate van participatie. We vinden een duidelijker effect van niet-groepsgebonden-altruïsme. Dit is in overeenstemming met theorieën over altruïsme en de opkomst bij verkiezingen (bijv. Evren 2012). Daarnaast levert deze studie een methodologische bijdrage: we introduceren een nieuwe procedure om verschillende niveaus van groepsidentiteit in het lab te induceren, zonder een

toevlucht te nemen tot natuurlijke groepen.

Net zoals groepsidentiteit en altruïsme een reden kunnen zijn om te participeren, kan een verzoek van een ander ook leiden tot participatie. Een uitgebreide experimentele literatuur die gebruik maakt van veld-data (zie het baanbrekende werk van Gerber en Green 1999), heeft aangetoond dat bepaalde mobilisatie tactieken (zoals deur-tot-deur colportage) succesvol zijn in het verhogen van de opkomst bij verkiezingen. Echter, andere mobilisatie tactieken, zoals massa-mailings, zijn grotendeels ineffectief. De vraag is, wat mensen drijft om te reageren op mobilisatie inspanningen. Hoofdstuk 3 onderzoekt het onderliggende psychologische mechanisme achter dit fenomeen. Het uitgangspunt is dat alle mobilisatie inspanningen zowel een materile inspanning als een normatief beroep op de kiezer omvatten. Mobilisatie kan dan werken via wederkerigheid, dat wil zeggen als een blijk van waardering voor de materile inspanning; en/of via de naleving van het normatieve beroep dat gedaan wordt, dat wil zeggen dat men het schenden van de norm wil voorkomen.

Het kader van hoofdstuk 3 is uitgebreid ten opzichte van de oorspronkelijke participatiespelen om het bestuderen van mobilisatie en participatie mogelijk te maken. In de experimenten varieer ik systematisch tussen de gebruikte mobilisatiemethode (een oproep door een persoon, de groepsleider, of een geautomatiseerde oproep) en of er (wel of niet) een normatief beroep wordt gedaan op het individu. De belangrijkste resultaten tonen aan dat een normatief beroep op de kiezer leidt tot verhoogde participatie, met name wanneer deze is gekoppeld aan mobilisatie. Mobilisatie op zichzelf is niet genoeg om participatie te verhogen, wat in tegenspraak is met de wederkerigheidshypothese. Daarnaast voer ik een analyse van de (punt)voorspellingen en de comparatieve statica van het model uit. Hierin vind ik dat het gedrag van leiders niet in overeenstemming is met de puntvoorspellingen maar we met de meeste comparatieve statica.

Informatie is een cruciale factor in het nemen van de juiste beslissingen, zowel voor individuele als voor collectieve beslissingen. Hoofdstuk 4, dat gebaseerd is op gezamenlijke werk met Rei Sayag, biedt een eerste benadering van de vraag of de kosten van de informatie invloed hebben op de manier waarop deze informatie wordt verwerkt in besluitvorming. De bevindingen zijn van belang voor de twee bekende en verwante resultaten in de politieke economie: rationele onwetendheid en het Condorcet jury theorema.

De literatuur over deze onderwerpen, zoals het merendeel van de literatuur met betrekking tot individuele besluitvorming, gaat ervan uit dat individuen informatie verwerken via de stelling van Bayes. Verder wordt aangenomen dat de stelling van Bayes wordt toegepast ongeacht de kosten van de informatie. In ons onderzoek

stellen we de vraag of deze aanname legitiem is. Wij construeren een individuele besluitvormingstaak waar risico een rol speelt, en varieren hoe de informatie aan proefpersonen beschikbaar wordt gemaakt: gratis, tegen een prijs of opgelegd tegen een prijs. Het laboratorium stelt ons in staat om selectieproblemen die optreden met veld-data te omzeilen: in het veld is het waarschijnlijk dat degenen die informatie verwerven degenen zijn die er het meeste baat bij hebben. Wij vinden dat de kosten van informatie invloed hebben op het toepassen van de stelling van Bayes: deelnemers aan het experiment hechten teveel waarde aan zowel de informatie die ze kiezen om te kopen als de informatie die ze gedwongen kopen. Kortom, kostbare informatie wordt zwaarder gewogen dan gratis informatie, wat leidt tot meer extreme bewegingen in de posterieure verwachtingen. Of dit leidt tot betere besluitvorming hangt af van hoever de posterieure verwachting met gratis informatie af ligt van het normatieve optimum.

## Sumário (Summary in Portuguese)

Compreender a participação política é um dos grandes desafios das ciências sociais. Sempre que são chamados a intervir em assuntos políticos, os indivíduos enfrentam um dilema: por um lado, o desejo de participar - de votar, protestar, fazer campanha, ou fazer-se ouvir; por outro lado, e aludindo à citação que abre o Capítulo 1, um desejo de ser 'deixado em paz' para que os outros assumam a responsabilidade do processo político e acarretem com os seus custos.

Esta tese explora como preferências não-*standard* e enviesamentos cognitivos sistemáticos podem influenciar a decisão de participar bem como a optimalidade das escolhas políticas. Os modelos tradicionais de economia política espelham os princípios centrais da visão 'neoclássica' ou da 'escolha racional', nomeadamente preferências guiadas pelo interesse próprio e racionalidade pura dos agentes (Rowley et al., 1993). Este paradigma tem rendido uma compreensão mais aprofundada do processo político. No entanto, alguns fenómenos parecem eludir o paradigma, com particular relevância a incapacidade de explicar a participação política individual. Esta tese tem como objetivo estender o modelo de escolha racional, providenciando direcções ao longo das quais as suas fundações *micro* podem ser enriquecidas. O objectivo final é aumentar o seu conteúdo explicativo e poder preditivo. Apesar de procurar novos caminhos para melhorar as fundações *micro* dos modelos de economia política, o trabalho contido nesta tese retém as técnicas convencionais da abordagem económica. Todos os capítulos usam uma combinação de modelos teóricos e experiências de laboratório. A primazia é dada ao que pode ser deduzido dos dados experimentais - os modelos são desenvolvidos na medida em que podem ajudar a prever e interpretar o que poderá ser observado no laboratório.

O Capítulo 2 aborda o efeito da identidade de grupo e do altruísmo na decisão de participar, e é baseado em trabalho conjunto com Arthur Schram e Joep Sonnemans. Quando grupos com interesses divergentes resolvem os seus diferendos através do processo democrático, o que é o caso em qualquer eleição, os laços que cada indivíduo tem para com o grupo são passíveis de influenciar a sua decisão de participação. Em termos mais gerais, a preocupação que um indivíduo tem para

com um elemento do seu grupo relativamente a um indivíduo de outro grupo deve determinar a sua disponibilidade para suportar os custos de participação. Na verdade, a identidade de grupo parece ser uma das forças motrizes da participação: nos Estados Unidos, a população Afro-americana participa a taxas mais elevadas do que o seu estatuto socioeconómico poderia prever (Leighley e Vedlitz 1999). Trata-se de um *puzzle*, uma vez que o nível socioeconómico é geralmente a variável que melhor prevê a participação política individual. Uma das potenciais explicações para este *puzzle* é o sentimento de identidade de grupo. No entanto, os dados de campo tornam extremamente difícil identificar o efeito causal da identidade de grupo *per se* na participação, uma vez que esta evolui concomitantemente com os processos de mobilização e de socialização. Uma experiência de laboratório dá-nos o controlo necessário a esta investigação.

No laboratório, cada participante é parte de um grupo, o qual interage com outro grupo em eleições simuladas (o jogo de participação de Palfrey e Rosenthal 1983). Usando um novo procedimento experimental, conseguimos induzir diferentes níveis de identificação de grupo nos tratamentos. Com base nos resultados teóricos e na evidência existente, tomamos como hipóteses que tanto a participação individual como a participação agregada estarão positivamente correlacionadas com o nível individual de identificação com o grupo e com o nível de identidade de grupo induzido nos diferentes tratamentos, respectivamente. Ao mesmo tempo, a nossa experiência também nos permite testar se os indivíduos com preferências altruístas tendem a participar mais vezes. Ao nível agregado, não são observadas diferenças substanciais na participação consoante o nível de identidade de grupo. A nível individual, há um efeito modesto da identidade de grupo sobre a participação. Um efeito mais forte é encontrado em indivíduos com preferências altruístas. Este resultado está em consonância com as teorias de participação eleitoral altruísta (por exemplo, Evren 2012). Um sub-produto importante deste estudo é de cariz metodológico, uma vez que propomos um procedimento que consegue induzir diferentes níveis de identidade de grupo no laboratório sem recorrer a categorias existentes fora dele, como a etnia ou o estrato socio-económico.

Assim como uma preocupação pelo bem-estar de outros é uma razão para participar, tendo sido incentivado por outros a fazê-lo parece também surtir efeito. Uma extensa literatura de experiências de campo (iniciada pelo trabalho seminal de Gerber e Green 1999), mostra que certas táticas de mobilização (como campanhas porta-a-porta) são bem-sucedidas em aumentar a afluência às urnas. No entanto, outras táticas de mobilização, como o envio de cartas em massa, redundam na sua maioria ineficazes. A questão permanece relativamente ao que leva as pessoas a re-

sponder aos esforços de mobilização. O Capítulo 3 investiga o mecanismo psicológico subjacente a este fenómeno. O ponto de partida é a observação de que todos os esforços de mobilização envolvem tanto um esforço material como um apelo normativo à participação. A mobilização poderia então surtir o seu efeito na participação devido a uma atitude de reciprocidade, ou seja, a participação enquanto gesto de agradecimento pelo esforço material envolvido no acto de mobilização; e/ou através da adesão aos apelos normativos veiculados pela mobilização, de forma a evitar a perda de bem-estar associada à violação da norma de participação.

O modelo teórico do Capítulo 2 é estendido de forma a permitir mobilização e participação. Os tratamentos experimentais diferem consoante o método de mobilização empregue (por seres humanos – os líderes do grupo – ou automatizado), e consoante a presença ou ausência de um apelo normativo veiculado por um indivíduo a outros do seu grupo. Os principais resultados mostram que o apelo normativo é bem-sucedido em aumentar a participação, em particular quando é combinado com o esforço de mobilização. A mobilização por si só não é suficiente para aumentar a participação, o que rejeita a conjectura da reciprocidade. No Capítulo 3 é também levada a cabo uma avaliação das previsões do modelo, o que nos permite concluir que o comportamento dos líderes não está em linha com as previsões numéricas, embora a maioria dos resultados de estática comparada sejam observados.

A informação é um determinante crucial de boas decisões, sejam elas individuais ou coletivas. O Capítulo 4, que é baseado em trabalho conjunto com Rei Sayag, propõe uma primeira abordagem à questão de saber se o custo da informação afecta a forma como ela é incorporada no processo decisório. Os resultados são potencialmente relevantes para dois conhecidos resultados em economia política: a ignorância racional e o teorema do júri de Condorcet.

A literatura que trata estes temas, assim como a maior parte da literatura sobre a tomada de decisão individual, assume que a informação é incorporada no julgamento individual através da regra de Bayes. Assume-se ainda que a regra de Bayes é aplicada independentemente do custo da informação. Este estudo questiona a legitimidade desta presunção. Para tal, delineamos um exercício de tomada de decisão individual sob risco e variamos a forma como a informação é disponibilizada aos participantes: de graça, opcionalmente com um custo ou imposta com um custo. O laboratório permite-nos contornar os problemas de seleção presentes no campo, onde os indivíduos que adquirem informação são os mais susceptíveis de beneficiar dela. Concluímos que a presunção de que o uso da regra de Bayes não depende do custo da informação deve ser questionada: os indivíduos tendem a sobrevalorizar tanto a informação que escolhem adquirir como a informação que são forçados a



adquirir. Em suma, a informação com custos é alvo de uma ponderação mais forte na tomada de decisões do que a informação sem custos. Se tal leva a melhores ou piores decisões depende de quão longe os indivíduos se encontram do ideal normativo quando a informação não tem custos.

The Tinbergen Institute is the Institute for Economic Research, which was founded in 1987 by the Faculties of Economics and Econometrics of the Erasmus University Rotterdam, University of Amsterdam and VU University Amsterdam. The Institute is named after the late Professor Jan Tinbergen, Dutch Nobel Prize laureate in economics in 1969. The Tinbergen Institute is located in Amsterdam and Rotterdam. The following books recently appeared in the Tinbergen Institute Research Series:

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