



Utrecht University

Referendums in Representative Democracies

Law and the Mathematics of Voting

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Introduction

European representative democracies are facing the challenges of rising populist powers and a decline in political legitimacy. This is accompanied by an increasing demand for more direct forms of democracy. The most widely discussed direct democratic instrument is the instrument of referendums. For more than 40 years,¹ it has been debated whether representative democracies ought to be supplemented with referendums. A debate that is not likely to reach a conclusion any time soon as it has resulted in a strong disagreement between proponents and opponents of referendums. Some authors even argue that the debate about the effects of referendums on the institutions and health of representative democracies is not grounded in knowledge but revolves around a question of belief.²

In the Netherlands, the opposition between “believers” and “non-believers” intensified during the 2017 Dutch general elections. The third proposal for a constitutional amendment in order to allow for binding referendums in the Netherlands was waiting for a second reading by the House of Representatives³ and new political parties were formed that argued for more direct forms of democracy. The political party *Stichting Forum voor Democratie*, which was at that time new and is now one of the largest political parties in the Netherlands, expressed the public discontent about the way cabinet Rutte-II dealt with the results of the first Dutch consultative referendum – the referendum about the Association Agreement between Ukraine and the EU (the Ukraine referendum). The party filed a lawsuit against the State.⁴ It contested that the response of cabinet Rutte-II to the results of the Ukraine referendum was not in accordance with Article 11 of the Dutch Consultative referendum law. Furthermore, the political movement *GeenPeil* hoped to enter the House of Representatives with a new party politics based on so-called “mini-referendums”: party members would get the opportunity to vote for every legislative proposal under consideration in the House of Representatives. Beryl Dreijer, who was the first woman on the party-list of *GeenPeil*, explained to me in an interview that these “mini-referendums” had to provide a better representation of the will of the electorate and a stronger controlling power over the representatives.⁵

¹ See, e.g., the comparative study into the practice and theory of referendums: *Referendums. A Comparative Study of Practice and Theory* (Washington, D.C.: American Enterprise Institute for Public Policy Research) by D. Butler and A. Ranney. (1978).

² See, e.g., W. Voermans. (2011). ‘Referendum: Geloofsartikel of Hebbeding, Drama of Nuttige Correctie?’ [‘Referendums: Article of Faith or Must-Have, Drama or Useful Correction?’], *Ars Aequi* 60 (6): 468-478, p. 469, but also R.J.B. Schutgens. (2017). ‘Referenda’, *Rechtsgeleerd Magazijn Themis* 4: 141, p. 141.

³ First a proposal for a constitutional amendment needs to be accepted by a simple majority in the First and Second Chamber, just like a legislative proposal that does not constitute a constitutional change. After the constitutional proposal is accepted by both Chambers, the Second Chamber has to be dissolved. When the new Second Chamber is formed, a second reading is held in which the new Second Chamber as well as the First Chamber have to accept the legislative proposal with a qualified majority of 2/3.

Both the first and second constitutional proposal for binding referendums did not get a qualified majority in the second reading. The first constitutional proposition was initiated by the First Kok Cabinet in 1996. Its failure in the second reading almost led to the resignation of the Second Kok Cabinet. However, this was prevented by the coalition parties’ agreement to submit a new constitutional proposition for binding referendums and to adopt a temporary referendum law (*de Tijdelijke Referendum wet*), which provided the possibility for holding non-binding referendums. The temporary referendum law applied from 2002 to 2005 and the second constitutional proposal was rejected in the second reading under the First Balkenende Cabinet. H.M.B. Breunese, ‘Het referendum. Nieuwe ronde, nieuwe kansen’, *Tijdschrift voor Constitutioneel Recht* 2013/344, p.346.

The third constitutional proposition was also accepted in the first reading and submitted for a second reading. The initiators hoped that the third time is the charm, but now we know that they were not lucky.

⁴ Rb. Den Haag 12 April 2017, ECLI:NL:RBDHA:2017:3667, rechtspraak.nl (*Stichting Forum voor Democratie tegen de Staat der Nederlanden*).

⁵ This interview was conducted as part of the qualitative research for the course *Methodology of Legal Research II: External Perspective*. Also, Professor Wim Voermans of Leiden University and Koen van der Krieken

This political context has inspired me to write this dissertation about whether referendums could and should supplement representative democracies. With this dissertation, I intend to take up the challenge of finding arguments that can transcend the daily discussions and constant flow of opinions, and can path the way for a common ground in the seemingly conflicting opinions about the supplementary value of referendums. That is, I hope to break the gridlock in the debate about the supplementary value of referendums.

In order to do so, I will use an interdisciplinary research approach: mathematical models and results are integrated into the legal-political debate about the supplementary value of referendums. The mathematical models and results can enhance an understanding of the systemic features of referendum voting and the design of referendums, i.e. the institution of referendums, which may help proponents and opponents to ground their beliefs in knowledge. Using this understanding, I will formulate legal conditions that should be taken into account if representative democracies are to be supplemented by referendums. These conditions can bring proponents and opponents closer together and support the legislator in the decision whether and, if so, when to implement referendums in representative democracies.

The innovative character of this integration of law and mathematics was recognised at the 2017 *Dare to Cross Over!* Conference at Utrecht University on June 8th, 2017. The pitch of my research ideas was awarded the *Dare to Cross Over prize*. This award encouraged me to start the challenging interdisciplinary journey that has resulted in this dissertation. The research poster that I used to present the research ideas to a wider audience during the conference is included at the end of this dissertation.

Besides the unique combination of law with mathematics, this dissertation is also unusual for another reason: it consists of two publications – a Dutch journal publication and an international journal publication.

The first paper is titled ‘De Wet raadgevend referendum afschaffen of verbeteren?’ [Abolishing or improving the Dutch Consultative referendum law?] and is a case-study of the Consultative referendum law (CRL) in the Netherlands. The paper was published in December 2018 in the *Nederlands Juristenblad (NJB)* prior to the abolishment of the CRL by Cabinet Rutte-III.

In this paper, I engage in the debate about whether to abolish the CRL. Drawing on an analysis of parliamentary decision-making prior to the adoption of the CRL and mathematical models about the effects of different types of quorum requirements, I argue that the arguments of Cabinet Rutte-III for abolishing the CRL do not justify this decision but instead ask for improving the law. Even though the CRL is now abolished, the insights about precipitate political decision-making and the function and effects of different quorum requirements in referendums could still be valuable for future decision-making on whether to implement a referendum with a quorum requirement, and if so, what type of quorum requirement.

The second paper is titled: ‘Are referendums and parliamentary elections reconcilable? The implications of three voting paradoxes.’ It will be published in the special issue ‘Towards Foolproof Democracy: Advancing Public Debate and Political Decision-Making’ of *Moral Philosophy and Politics*, edited by David Lanius and Ioannis Votsis. The online version has been published and the paper version will be available in the beginning of 2020.

In this paper, I compare the method for determining the majority outcome in referendums to the method for determining the majority outcome in parliamentary elections by drawing on three mathematical paradoxes. I show that there are systemic contrarities between the two methods. These contrarities point out that in some instances referendums enhance the power of the electorate over decision-making and disrupt the power and prestige of representatives, while in other instances referendums may undermine the power of citizens and enhance the power of

of Tilburg University were interviewed for this course. The interviews sparked my imagination for the topic of referendums in representative democracies.

representatives. Using this insight, I formulate four legal conditions that should be taken into consideration if representative democracies are to be supplemented by referendums.

Because of the unusual character of this dissertation in terms of the research methodology and the research output, I have added to this dissertation a methodology appendix. In this appendix, I describe the research process and reflect on the research methodology.

De Wet Raadgevend Referendum afschaffen of verbeteren?

Suzanne Andrea Bloks

Abstract

Bij het besluit om de WRR af te schaffen duiden de genoemde argumenten op noodzaak tot verbetering van de WRR in plaats van noodzaak tot afschaffing. Het gebrek aan inhoudelijke overwegingen over het ontwerp van referenda volgt een trend die is ingezet bij het instellen van de WRR. De introductie van de opkomstdrempel in de WRR geeft dit beeldend weer. Dit artikel maakt inzichtelijk hoe wijziging van de opkomstdrempel in de WRR de werking van raadgevende referenda kan verbeteren. Dit laat zien dat er mogelijkheden zijn om het niet-bindende raadgevend referendum door middel van aanpassingen een beter democratisch instrument te laten zijn.

1. Introductie

Kabinet Rutte III wil de Wet Raadgevend Referendum (WRR) afschaffen. Het Ministerie van Binnenlandse Zaken onderzoekt op dit moment of een referendum over de afschaffingswet kan worden uitgesloten.¹ Er kan echter niet voorkomen worden dat de wet nog één keer in werking zal treden, namelijk voor een raadgevend referendum over de Sleepwet.²

De reden voor deze kennelijke noodzaak van het kabinet om een wet af te schaffen die enkel drie jaar bestaat en pas één keer zijn werking heeft gevonden (het Oekraïne referendum)³, is dat het raadgevend referendum niet gebracht heeft wat ervan verwacht werd, “onder meer door controverse over de wijze van aanvragen en verschillende interpretaties van de uitslag”⁴, aldus het regeerakkoord.

Het afschaffen van de WRR zal het kabinet veel kritiek opleveren. Zo wordt het een ‘antidemocratisch’ besluit genoemd dat de burger een democratisch instrument ontnemt nu de wet voor het correctief referendum in de tweede lezing weer niet is geaccepteerd.⁵

Wellicht bracht het Oekraïne referendum niet het herstel van vertrouwen in de politiek waarop gehoopt werd, echter de burger een democratisch instrument ontnemen zonder een goede onderbouwing voor deze beslissing zal het vertrouwen in de politiek zeker niet ten goede komen. In dit artikel zal ik betogen dat de argumenten die de regering geeft, geen noodzaak vormen tot afschaffing van de WRR. De regering heeft de mogelijkheid het ontwerp van raadgevende referenda te verbeteren.

Allereerst zal ingegaan worden op de argumenten die de regering geeft voor het afschaffen van de WRR. Vervolgens zal dieper ingegaan worden op het argument dat betrekking heeft op de controverse over de interpretatie van de uitslag. Er zal betoogd worden dat de voornaamste redenen voor deze controverse weggenomen kunnen worden door het veranderen van de opkomstdrempel. Daarbij zal onderzocht worden wat de effecten van verschillende quorumeisen zijn op participatie, op de representativiteit van de referendumuitslag en op het bindende karakter van de uitslag.

¹ J. de Vries, ‘Geen referendum over afschaffen van Wet raadgevend referendum’ *Volkscrant* 1 december 2017.

² De vernieuwde Wet op de inlichtingen- en veiligheidsdiensten.

³ Het referendum over de Associatieovereenkomst tussen de Europese Unie en Oekraïne.

⁴ VVD, CDA, D66 en Christen Unie, ‘Vertrouwen in de Toekomst. Regeerakkoord 2017-2021’ (online publiek) <www.kabinetsformatie2017.nl>, p. 8.

⁵ G. Waling, ‘Rutte III lijkt wel antidemocratisch’ *Volkscrant* 22 oktober 2017.

2. Ondoordachte besluitvorming

De argumenten voor de afschaffing van de WRR omvatten precies één zin in het regeerakkoord, welke enkel wijst op twee controversen en niet de noodzaak tot afschaffing onderbouwt.

Minister Ollongren van Binnenlandse Zaken verdedigt het afschaffen van de WRR in het plenair debat over het regeerakkoord door discussiepunten op te sommen die volgden op het Oekraïne referendum: de opkomstdrempel, de geschiktheid van referendumonderwerpen, interpretatieproblemen bij de uitslag en de vraag in hoeverre het Oekraïne referendum het vertrouwen in de politiek heeft hersteld.⁶ De minister leidt hieruit af dat het politiek en maatschappelijk draagvlak is uitgehold. Dat de discussiepunten tot deze conclusie over draagvlak leiden, wordt echter niet onderbouwd.

Daarnaast wordt niet duidelijk gemaakt waarom het oplossen van de discussiepunten binnen een raadgevend referendum onmogelijk is. De controverse over de wijze van aanvragen kan (met een daarbij behorend onderzoek naar de noodzakelijke verbeteringen) leiden tot een verbetering van de WRR. Ook heeft het Oekraïne referendum geleerd dat wellicht minder onderwerpen referendabel moeten zijn dan de wet toestaat. Zo zouden referenda over verdragen die enkel nog geratificeerd moeten worden niet referendabel mogen zijn. De enige conclusie die ik daaruit kan trekken, is dat artikel 5 WRR, welke bepaalde onderwerpen uitsluit voor een referendum, verbeterd zou moeten worden.

Eveneens kan controverse over de interpretatie van de uitslag verminderd worden door het ontwerp van de raadgevende referenda in de WRR te verbeteren. Bij het Oekraïne referendum had de controverse over de interpretatie van de uitslag twee voornaamste redenen: (1) de uitslag gaf geen goed beeld van de voorkeur van de bevolking doordat sommige voorstemmers uit strategische overwegingen kozen voor stemonthouding, (2) ondanks het adviserende karakter van het referendum werd er verondersteld dat de regering de uitslag volgde. In het navolgende zal ik betogen dat beide problemen een gevolg zijn van de opkomstdrempel in de WRR en zal ik onderzoeken wat de beste oplossing is voor de twee problemen.

Het gebrek aan onderbouwing voor het kennelijke uitgeholde draagvlak in combinatie met het feit dat de problemen volgend op het Oekraïne referendum opgelost kunnen worden door verbetering van het referendumontwerp, maakt de noodzaak de WRR af te schaffen twijfelachtig. Mijns inziens kan er vanwege dit gebrek aan goede onderbouwing gesproken worden van ondoordachte, of op zijn minst naar de burger gepresenteerde ondoordachte, besluitvorming.

3. De Opkomstdrempel

3.1. De Introductie van de Opkomstdrempel in de WRR

De vormgeving van een democratisch instrument is extreem belangrijk voor het functioneren van het staatsbestel en dat maakt het vermoeden van ondoordachte besluitvorming bij zowel vormgeving als afschaffing van een democratisch instrument een ernstig feit. De keuze van de regering voor het afschaffen van de WRR lijkt dezelfde trend te volgen als bij de vormgeving van de WRR: weinig aandacht voor het ontwerp en voor knelpunten. Dit is terug te zien bij het besluit om een opkomstdrempel van 30% aan de raadgevende referenda toe te voegen.

De opkomstdrempel was in eerste instantie geen onderdeel van de WRR. De initiatiefnemers van de wet, Dubbelboer, Duyvendak en Van der Ham,⁷ vonden een quorum niet nodig gezien het adviserende karakter van het referendum. Zo stelden ze in de Memorie van Toelichting: “Een

⁶ Plenair debat Tweede Kamer, Begroting Binnenlandse Zaken en Koninkrijksrelaties 2018, 16 nov 2017.

⁷ Zij initieerden de WRR in 2005. Doordat het twaalf jaar heeft geduurd voordat de wet in werking is getreden en zij intussen de kamer hadden verlaten, zijn er verschillende opvolgers geweest. Fokke, Voortman en Schouw waren de laatsten die het initiatief voor de WRR op zich namen.

gewone meerderheid is een meerderheid, ongeacht opkomst. Het is immers vervolgens aan de wetgever om te bepalen of de uitslag als zwaarwegend advies beschouwd moet worden.”⁸

In de bespreking van het wetsvoorstel in de Eerste Kamer op 8 april 2014, deed Ruud Koole van de PvdA echter het dringende verzoek om een quorum in de WRR te introduceren. Hij stelde: “Ostrogorski zei het immers al: een referendum als aanvulling op de parlementaire democratie is nodig en mogelijk, maar wel onder voorwaarden. Voor mijn fractie hoort een opkomstdrempel bij die voorwaarden, waarbij te denken valt aan een drempel gelijk aan die in de Tijdelijke referendumwet van het begin van deze eeuw: 30%.”⁹ Naar het oordeel van de PvdA-fractie was een opkomstdrempel noodzakelijk voor een zorgvuldige vormgeving van het raadgevend referendum als aanvulling op de representatieve democratie. De opkomstdrempel zou dienen als bewijs dat de stemgerechtigden het referendum serieus nemen.

Koole stelde een opkomstdrempel voor. Dit houdt in dat de uitslag alleen geldig is als een bepaald percentage van de stemgerechtigden heeft gestemd. Er zijn echter ook andere soorten quorumeisen mogelijk. Een andere bekende mogelijkheid is de uitkomstdrempel, waarbij de *meerderheid in de uitkomst van het referendum* een bepaald percentage van de stemgerechtigden moet omvatten. Een uitkomstdrempel veronderstelt een opkomstdrempel en wordt daarom ook wel een dubbele drempel genoemd. Immers als de meerderheid minstens 30% van de stemgerechtigden omvat, moet ook minstens 30% hebben deelgenomen aan de stemming.¹⁰

Verder leek Koole te suggereren dat hij een simpele kopie van het quorum in de Tijdelijk referendumwet (Trw) voorstelde. De Trw bevat echter een uitkomstdrempel en geen opkomstdrempel.¹¹

Aangezien het stemgedrag van de PvdA-fractie in de Eerste Kamer afhankelijk was van het instellen van een quorum, is uiteindelijk besloten aan hun wensen tegemoet te komen: er werd voorzien in een opkomstdrempel van 30%, wat werd vastgelegd in art 3 WRR.

Over de (nadelige) consequenties van een opkomstdrempel werd niet meer gedebatteerd en ook het soort drempel en de hoogte kregen weinig aandacht. Doordat Ruud Koole leek te suggereren dat hij een simpele kopie van het quorum in de Trw voorstelde, werd wellicht onderzoek naar soorten quorumeisen en de juiste hoogte in het huidige debat niet meer nodig geacht.

Aangezien de Trw niet een opkomstdrempel maar een uitkomstdrempel bevat is het gebrek aan onderzoek naar een juiste hoogte van de opkomstdrempel een fundamenteel gemis. De 30% grens van de uitkomstdrempel in de Trw kan niet simpelweg gekopieerd worden, omdat een 30% uitkomstdrempel een heel ander vereiste is dan een 30% opkomstdrempel. In de volgende figuur wordt dit weergegeven.

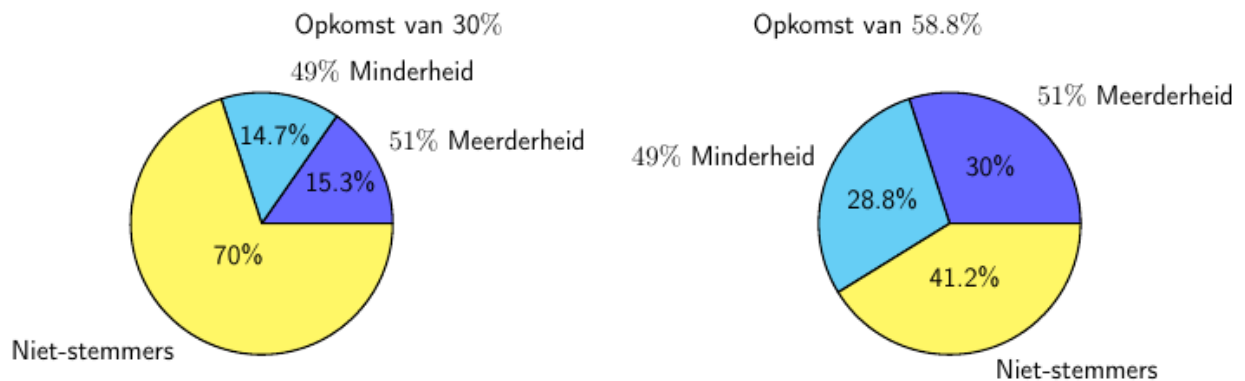
⁸ *Kamerstukken II*, 2005/06, 30372, 3, p. 6.

⁹ *Handelingen I*, 2013/14, 26, item 5, p. 9

¹⁰ J.L.W. Broeksteeg en K.H.J. van der Krieken, ‘Lokale referenda in Nederland: gemeenten als leerschool voor staatskundige vernieuwing’, *RM Themis* 2017, afl. 4, p. 169.

¹¹ Zie art. 5 Trw.

Een 30% Opkomstdrempel vs. een 30% Uitkomstdrempel



Met een opkomstdrempel van 30% hoeft de meerderheid slechts uit 15,3% van de kiesgerechtigden te bestaan, terwijl dit bij een uitkomstdrempel 30% is. Daarnaast zal de opkomst slechts 30% hoeven zijn, terwijl een 51% meerderheid bij een uitkomstdrempel van 30% een opkomst van 58,8% betekent.

Daarnaast blijkt bij de Trw discussie te zijn geweest over de haalbaarheid van een meerderheid gegeven de quorumeis. De commissie voor Binnenlandse Zaken en Koninkrijksrelatie schreef over de op dat moment voorgestelde uitkomstdrempel van 34%: “Bij een opkomst die bij referenda gewoonlijk niet hoger dan 40% komt (en meestal een stuk lager) leidt dit tot een vereiste van «Russische verkiezingsuitslagen». (...) Bij een uitzonderlijk hoge opkomst van 50% moet immers al 60% tegenstemmen, bij 40% opkomst moet echter al 75% tegenstemmen, bij 35% opkomst moet 87,5% tegenstemmen, en bij 30% opkomst moet zelfs 100% tegenstemmen.”¹²

De 30% grenswaarde uit de Trw is waarschijnlijk een afgeleide van het advies van de Staatscommissie-Biesheuvel uit 1985.¹³ Dit is echter een advies van meer dan 30 jaar geleden en behoeft herziening in het licht van het huidige opkomstpercentage bij stemmingen.

De opkomstdrempel van 30% heeft dus door het politieke spel zijn weg naar de WRR gevonden: om de WRR door de kamer te krijgen, voelden de indieners van het wetsvoorstel zich genoodzaakt aan de eisen van de PvdA te voldoen. Ik zal in de volgende paragrafen laten zien dat de discussie over de interpretatie van de uitslag het gevolg is van de opkomstdrempel. Al zal het veranderen van de opkomstdrempel discussie over de interpretatie nooit helemaal kunnen wegnemen, aangezien het ontbreken van nuancering kenmerkend is voor een dichotome vraag.¹⁴

3.2. Strategisch stemmen

Een opkomstdrempel kan leiden tot strategische stemonthouding. Het Oekraïne referendum is hier een goed voorbeeld van. Voorstanders zagen zich voor de strategische beslissing geplaatst om ofwel aan het referendum deel te nemen en voor de wet te stemmen of niet aan het referendum deel te nemen in de hoop dat de opkomstdrempel dan niet werd gehaald.¹⁵ Dit verschijnsel, waarbij het

¹² *Kamerstukken II, 1999/2000, 27034, 4, p.12.*

¹³ *Staatscommissie-Biesheuvel, Eindrapport van de staatscommissie van advies inzake de relatie kiezers-beleidsvorming: referendum en volksinitiatief, 's-Gravenhage: Staatsuitgeverij 1985, p. 54-55; Broeksteeg en Van der Krieken 2017, p. 170.*

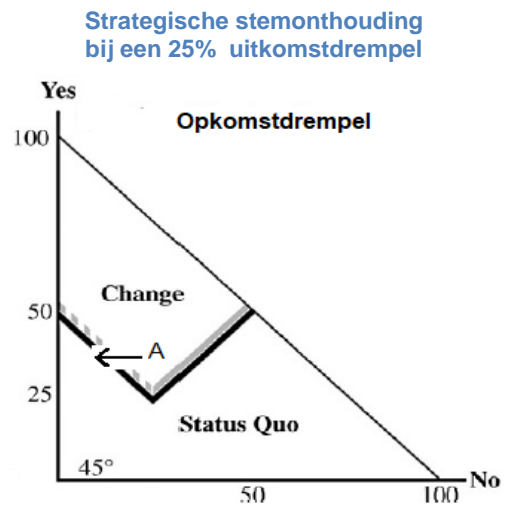
¹⁴ Soms wordt voorgesteld om in plaats van een ja/nee-vraag de stemmer meerdere (genuanceerdere) opties te geven. Literatuur laat echter zien dat zo'n referendum gevoelig is voor agenda manipulatie. De formulering van de alternatieven bij een niet-dichotome keuze kan gemakkelijk de uitslag beïnvloeden. (Nurmi H (1997) *Referendum Design: An exercise in applied social choice theory. Scand Polit Studies* 20:33–52)

¹⁵ Kiesraad, 'Evaluatie Raadgevend Referendum 6 april 2016', kenmerk 2016-0000299557, p.6.

mogelijk is de uitslag te beïnvloeden door stemonthouding, wordt de *no-show paradox*. Het is een paradox voor *status quo* stemmers, omdat de stem meetelt voor het behalen van de opkomstdrempel maar het behalen van de drempel niet in hun voordeel is. Immers, wanneer de drempel niet wordt gehaald, zal de referendumuitslag niet legitiem zijn en blijft de *status quo* behouden.

De (enigszins bewerkte) figuur van Aguiar-Conraria en Magalhães¹⁶ geeft een opkomstdrempel weer van 25%. Wanneer de referendumuitslag rond de grijze stippellijn ligt, zorgt een *status quo* stem in haar nadeel dat de opkomstdrempel wordt gehaald. In dat geval kan de *status quo* stemmer dus beter niet stemmen. Als de *status quo* stemmer denkt dat de referendumuitslag rond punt A ligt, dan zal stemonthouding het punt naar links doen verschuiven. De figuur laat zien dat het behoud van de *status quo* daarmee waarschijnlijker wordt.

Deze prikkel tot strategische stemonthouding kan zelfs tot vrijwel geen participatie onder *status quo* stemmers leiden. Zo werd bij de Italiaanse referenda tussen 1987 en 2007, waarbij de opkomst meer dan de helft van de stemgerechtigden moest omvatten, stemonthouding het functioneel equivalent van tegenstemmen. De drempel werd in 24 van de 49 referenda niet gehaald.¹⁷ De meest controversiële casus is het Italiaanse referendum uit 2005 over het verbod op het gebruik van stamcellen van embryo's en strenge regels voor in vitro fertilisatie. Hierbij riepen zowel de Kerk als sprekers van de Senaat en de Tweede Kamer op tot stemonthouding zodat de opkomstdrempel niet werd gehaald.¹⁸



Al veronderstelt een uitkomstdrempel een opkomstdrempel, het heeft niet dezelfde gevolgen. Zo prikkelt een uitkomstdrempel niet tot strategische stemonthouding, omdat de *status quo* stem niet bepalend is voor het behalen van de drempel. Om verandering teweeg te brengen, zullen de hervormers in de meerderheid moeten zijn en zal deze meerderheid de drempel moeten halen. Vaak wordt onterecht en te gemakkelijk de conclusie getrokken dat een uitkomstdrempel een goed alternatief is voor de opkomstdrempel omdat het geen strategische stemonthouding veroorzaakt.¹⁹ Een uitkomstdrempel kan eveneens ongewenste effecten hebben. Social choice theoreticus, Kenneth May, stelde dat een afwijking van de gewone meerderheidsregel altijd leidt tot problemen: de nieuwe regel geeft geen definitief resultaat of trekt een individu of alternatief voor, of de uitslag verandert niet bij verandering van individuele voorkeuren.²⁰ Een quorumeis, of dat nu een opkomst- of uitkomstdrempel is, introduceert zo'n afwijking op de meerderheidsregel.²¹

¹⁶ L. Aguiar-Conraria en P.C. Magalhães, 'How quorum rules distort referendum outcomes: Evidence from a pivotal voter model', *European Journal of Political Economy* 2010(a), afl. 26, p. 544 en L. Aguiar-Conraria en P.C. Magalhães, 'Referendum design, quorum rules and turnout', *Public Choice* 2010(b), afl. 144, p.69.

¹⁷ Aguiar-Conraria en Magalhães 2010(a), p.550.

¹⁸ S. Zwart, 'Ensuring a representative outcome: the daunting task of setting the quorum right', *Social Choice and Welfare* 2010, afl. 34, p. 643.

¹⁹ Zie onder andere, Staatscommissie-Biesheuvel 1985, p.54-55; Raad van Europa, 'Guidelines for Constitutional Referendums at National level', CDL-INF (2001) 10, (Venetië, 6-7 Juli 2001), p. 7; P. Boele van Hensbroek et.al. 'Goede raad is duur: Aan welke voorwaarden zou een raadgevend referendum moeten voldoen?', *RM Themis* 2017, afl. 4, p. 160; F. Hendriks, K.H.J. van der Krieken en C.C.L. Wagenaar, 'Democratische zegen of vloek? Aantekeningen bij het referendum.' Amsterdam: Amsterdam University Press 2017, p. 179.

²⁰ K. May, 'A set of independent necessary and sufficient conditions for simple majority decision', *Econometrica* 1952, p. 683.

²¹ Aguiar-Conraria en Magalhães 2010(a), p. 542.

Een uitkomstdrempel kan leiden tot *passieve* stemonthouding. Stemmers nemen niet de moeite omdat hun stem toch geen verschil maakt voor de uitslag.

Dit wordt weergegeven in de figuur.²² Er geldt een uitkomstdrempel van 25%. Wanneer de referendumuitslag rond de grijze lijn ligt maakt de *status quo* stem verschil. Echter, wanneer minder dan 25% van de stemgerechtigden voor het behoud van de *status quo* stemmen, dan maakt de *status quo* stem geen verschil. Verandering zal immers alleen plaatsvinden als de uitkomstdrempel door de veranderaars gehaald wordt, in welk geval 25% of meer van de stemgerechtigden voor verandering stemt. Als de *status quo* stemmer denkt dat de referendumuitslag rond punt A ligt, dan zal niet-stemmen het punt naar links doen verschuiven. De figuur laat zien dat verandering dan echter even waarschijnlijk blijft als met de stem.

In het algemeen geeft de uitkomstdrempel minder gewicht aan de *status quo* stem. Wanneer de referendumuitslag afhankelijk is van het behalen van de uitkomstdrempel, is stemonthouding equivalent aan *status quo* stemmen. Met andere woorden, stemonthouding kan worden geïnterpreteerd als *status quo* stemmen.²³

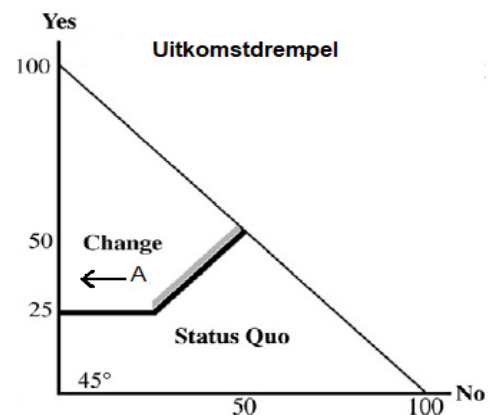
Dit werd duidelijke in de Deense constitutionele referenda uit 1920 en 1939 en verschillende referenda met een uitkomstdrempel die op statelijk en lokaal niveau gehouden zijn in Duitsland. Zo werd in Reutlingen in 1986 een referendum gehouden over het bouwen van een bunker, waarbij de gemeenteraad en de CDU een pamflet verspreidden dat opriep om thuis te blijven. Er werd immers alleen gevraagd om tegen het bouwen van een bunker te stemmen. Volgens het pamflet was ook stemonthouding een goedkeuring van het besluit van de gemeenteraad om een bunker te bouwen.²⁴

Concluderend, opkomst- en uitkomstdrempels kunnen leiden tot controversen over de referendumuitslag, omdat door het effect op participatie de uitslag niet per se representatief voor de opinie van het volk is.

3.3. (Niet)-Bindende referendumuitslagen

Voor een bindend referendum is in Nederland een wijziging van de constitutie nodig, omdat artikel 81 van de Grondwet de bevoegdheid tot het vaststellen van wetten in formele zin uitsluitend in handen van de regering en de Staten-Generaal legt en daarmee niet de burger toestaat bindende wetgevingsbesluiten te nemen. De WRR was bedoeld als opmaat tot het correctief referendum middels het bieden van niet-bindende referenda.²⁵ Doordat het voorstel voor een correctief referendum nu voor de derde keer in tweede lezing is afgewezen, lijkt de WRR geen opmaat meer te zijn maar een eindstation voor referenda in Nederland.²⁶

Passieve stemonthouding bij een 25% uitkomstdrempel



²² Ibidem, p. 544; Aguiar-Conraria en Magalhães 2010(b), p.69.

²³ J. Verhulst en A. Nijeboer, *Direct Democracy: Facts and Arguments about the Introduction of Initiative and Referendum*, Brussel: Democracy International 2007, p.19.

²⁴ Ibidem, p.19.

²⁵ Regeerakkoord 2017-2021, p. 8.

²⁶ Voor een grondwetswijziging moet het wetgevingsvoorstel in de Eerste en Tweede Kamer met een gewone meerderheid aangenomen worden. Daarna moet de Tweede Kamer ontbonden worden en wordt er een tweede lezing gehouden waarbij de Eerste Kamer en de nieuwe Tweede Kamer het wetgevingsvoorstel met een 2/3 meerderheid moeten aannemen. Het eerste grondwetswijzigingsvoorstel ter introductie van bindende referenda uit 1996 werd onder kabinet Kok II in tweede lezing afgewezen. Het tweede voorstel werd onder kabinet Balkenende I en het derde werd recentelijk onder Rutte III in tweede lezing afgewezen. (H.M.B. Breunese, 'Het referendum. Nieuwe ronde, nieuwe kansen', *Tijdschrift voor Constitutioneel Recht* 2013, afl. 344, p.346.)

Het niet-bindende karakter van het huidige referendum is een discussiepunt. De referendumuitslag van het Oekraïne-referendum werd in essentie door burgers als bindend ervaren. Dit was niet alleen te danken aan de toezeggingen van Tweede Kamer voorafgaand aan het referendum om de uitslag te volgen,²⁷ het werd ook, zo zal ik betogen, veroorzaakt door het quorum in de WRR.

Het vaststellen van een quorum in de WRR is altijd aan veel debat onderhevig geweest. Voorstanders en tegenstanders zijn het erover eens dat de raadgevende referenda uit de WRR formeel niet-bindend zijn, maar er bestaat meningsverschil over de vraag of de referenda met een quorum materieel een bindend karakter krijgen. Het standpunt dat ik in dit debat inneem is hetzelfde als de Raad van State, welke stelt dat het niet-bindende karakter in de praktijk wordt ondermijnd door de bepaling dat een uitslag geldig is als de meerderheid een bepaald deel van het electoraat vertegenwoordigt.²⁸ Deze stelling wordt ook bevestigd naar aanleiding van het Oekraïne referendum, waarin staat dat de opkomsthempel vaak expliciet wordt genoemd als reden waarom de regering naar de uitslag zou moeten luisteren. Uit het onderzoek blijkt dat “zelfs een kleine meerderheid van de voorstemmers (51,9%) en niet-stemmers (57,3%) vindt dat de regering moet luisteren naar de burger en de uitkomst moet volgen.”²⁹

Bij de introductie van de opkomsthempel in de WRR waren Tweede Kamerleden Fokke, Voortman en Schouw, die uiteindelijk verantwoordelijk waren voor de indiening van het wetsvoorstel, van mening dat de drempel geen afbreuk zou doen aan het adviserend karakter van de referenda uit de WRR. Ze stelden dat de wetgever niet gebonden is het advies van de uitslag op te volgen bij het behalen van de drempel en dat de wetgever eveneens kan besluiten de uitslag zwaar te laten wegen bij een opkomst beneden de drempel. Daarmee weerlegden ze niet dat de wetgever zich materieel genoodzaakt zal voelen om het advies van de uitslag op te volgen wanneer de opkomsthempel is behaald.³⁰

Daarnaast merkten ze op dat een te hoge opkomsthempel afbreuk zou doen “aan het adviserend karakter van de uitkomst van het raadgevend referendum. Indien de uitkomst van een raadgevend referendum na het behalen van een hoge opkomsthempel wordt vastgesteld, geldt die uitkomst weliswaar formeel als een advies, maar zal die uitkomst naar de mening van de initiatiefnemers moeilijker te negeren zijn en wordt de uitkomst daarmee wellicht bindender dan voor een advies wenselijk is.”³¹ Met deze opmerking compliceerden ze de vraag of het quorum leidt tot materieel bindende referenda door te richten op de vraag welke hoogte van een quorum leidt tot een materieel bindend karakter. Dit is een onnodige complicatie, want, zo zal ik betogen, het is niet de hoogte maar de functie van het quorum dat het materieel bindende karakter van referenda teweeg brengt. Met andere woorden, het is inherent aan de quorumeis dat een uitslag materieel bindend zal zijn. Natuurlijk zal een verwaarloosbaar laag quorum hetzelfde zijn als geen quorum, maar iedere quorum van betekenis zal het neveneffect van een materieel bindende uitslag hebben.

Het wordt in referendumwetgeving geïntroduceerd om de legitimiteit van de uitkomst te waarborgen, welke een lage opkomst niet kan bieden.³² Het quorum wordt ook wel beschreven als

²⁷ NOS, ‘Kamer: Uitslag referendum Oekraïne respecteren’, <<http://nos.nl/artikel/2071257-kamer-uitslag-referendum-oekraïne-respecteren.html>> (Bezocht 13 April 2017).

²⁸ *Kamerstukken II*, 2013/14, 33934, 4, p.1-2.

²⁹ Jacobs, K. et al, namens Stichting Kiezersonderzoek Nederland, ‘Het Oekraïne Referendum: Nationaal Referendum Onderzoek 2016’, p. 26.

³⁰ *Kamerstukken II*, 2013/14, 33934, 4, p.3. Deze argumentatie werd afgeleid uit een rapport van de Raad van State met betrekking tot het quorum in de Trw. Kennelijk was de Raad van State destijds van mening dat een niet-bindend referendum en een quorum samen kunnen gaan.

³¹ *Kamerstukken II*, 2013/14, 30372, G, p.1-2.

³² Qvortrup 2005, p.173; Aguiar-Conraria en Magalhaes, 2010(a), p.542; H. Herrera and A. Mattozzi, ‘Quorum and turnout in referenda’, *Journal of the European Economic Association* 2010, afl 8(4), p. 839.

een manier om te voorkomen dat actieve minderheden hun wil opleggen aan een passieve meerderheid.³³ Het quorum is dan ook vooral van belang voor bindende referenda. Enerzijds beschermt het quorum een passieve meerderheid tegen een actieve minderheid, anderzijds legitimeert het een actieve meerderheid in het opleggen van hun wil aan een minderheid. Daarmee kan het quorum “voorkomen dat referenda geen representatief beeld geven van de wil van het volk.”³⁴ Dat het deze functie niet altijd vervult, neemt niet weg dat het quorum hiervoor wel bedoeld is.³⁵

Wanneer het referendumontwerp geen quorum kent, kan de legitimiteit van een referendum worden gewogen tegen verschillende factoren. Deze factoren kunnen de intensiteit van de campagne en de maatschappelijke belangstelling zijn, evenals het opkomstpercentage. Echter, door een quorumeis te introduceren, wordt het behalen van de drempel de bepalende factor voor de legitimiteit van het referendum. Het is dan ook bij het behalen van de drempel erg moeilijk om de legitimiteit van de referendumuitslag te ontkennen op basis van andere factoren.

Eveneens zou men de functie van het quorum ontkennen wanneer een uitslag waarbij de drempel niet is gehaald toch als legitiem wordt beschouwd. Dit is echter wel wat Kamerleden Fokke, Voortman en Schouw beweerden. Zij stelden dat een zeer duidelijke uitslag waarbij de drempel niet is gehaald toch zwaar kan worden gewogen, omdat het behalen van de opkomstdrempel slechts een van de factoren is die afgewogen worden bij de interpretatie van de uitslag.³⁶ Vanuit deze invalshoek zou de quorumeis enkel aangeven of een opkomstpercentage hoog is en is de hoogte van de opkomstpercentage een van de factoren bij het interpreteren van de uitslag. Maar als het quorumeis niets meer is dan een norm om te bepalen wanneer er sprake is van een hoog opkomstpercentage, waarom moet deze norm dan in de wet worden vastgelegd? Voorstanders van de quorumeis bij niet-bindende referenda verliezen de functie van het quorum uit het oog.

Het materieel bindende karakter leidt voornamelijk tot controverse over de referendumuitslag wanneer de drempel wordt behaald en de meerderheid verandering van wetgeving wil. Al is de wetgever formeel vrij de uitslag te negeren en zou hij het liefst van deze optie gebruik maken, als hij zijn reputatie en het vertrouwen in de democratie niet wil schaden, heeft hij materieel maar één optie: de uitslag accepteren.

Met deze beperking op de interpretatie van de uitslag, wordt de reële beslissingsruimte van de volksvertegenwoordiging niet per se illusoir. Zo merken Schutgens en Sillen terecht op dat er blijkbaar nog enige politieke afwegingsruimte bestond in het Oekraïne referendum aangezien er naar een ‘geitenpaadje’ tussen het volgen van de referendumuitslag en onvoorwaardelijk ratificatie werd gezocht.³⁷ Dit laat niet onverlet dat het materieel bindende karakter met de sterk beperkende werking op de interpretatie mogelijkheden spanning oplevert met de Grondwet. Eveneens levert het spanning op met de WRR zelf. Zo staat in artikel 11 in de WRR dat de regering na een raadgevende uitspraak tot afwijzing zo spoedig mogelijk een voorstel moet indienen dat uitsluitend strekt tot intrekking van de wet of tot regeling van de inwerkingtreding van de wet.³⁸ De regering is dus niet

³³ Aguiar-Conraria en Magalhaes 2010(a), p.542.

³⁴ Boele van Hensbroek 2007, p.160.

³⁵ Zo kan een actieve minderheid voor verandering in staat zijn de drempel en een meerderheid in het referendum te halen, doordat de drempel *status quo* stemmers prikkelt tot strategische of passieve stemonthouding. Eveneens kan een *status quo* minderheid geholpen worden door de drempel wanneer de apathische meerderheid voor verandering niet in staat is de drempel te halen.

³⁶ *Kamerstukken II*, 2013/14, 33934, 4, p.1-2.

³⁷ R.J.B. Schitgens en J.J.J. Sillen, ‘De grondwettigheid van wetgevingsreferenda’, *RM Themis* 2017, p.197.

³⁸ Artikel 11 WRR maakt niet duidelijk wie dit voorstel moet indienen. Op basis van artikel 82 Gw kan dit zowel de regering als de Tweede Kamer zijn. Naar aanleiding van een raadgevend referendum is een wetsvoorstel van de regering meer voor de hand liggend dan een initiatiefvoorstel van de Tweede Kamer. Dit komt ook terug in

verplicht de uitslag te volgen, maar is verplicht de wet waarover gestemd is te heroverwegen.³⁹ De rechtszaak van *Stichting Forum voor Democratie*⁴⁰ laat zien dat het betwistbaar is of de keuze voor geitenpaadjes in lijn is met artikel 11 WRR, omdat de regering daarmee niet zo spoedig mogelijk overgaat tot het inwerking laten treden dan wel intrekken van de wet maar kiest voor een middenweg. Omdat de rechter naar zijn mening niet bevoegd was om een oordeel te vellen, daar hij zich niet mag mengen in het proces van politieke besluitvorming, is er geen antwoord op de vraag of geitenpaadjes in strijd zijn met artikel 11 WRR.⁴¹

Concluderend, in het debat over de gevolgen van een quorum op het bindende karakter van adviserende referenda wordt het onderscheid tussen materiele en formele binding vaak niet gemaakt. Er wordt over het hoofd gezien dat het inherent aan de functie van een quorum is dat bij het behalen van de drempel de uitslag een materieel bindend karakter krijgt.

Een goede oplossing is dan ook om het quorum (de opkomstdrempel) uit de WRR te verwijderen. Vanzelfsprekend blijft de keuze om een adviserende referendumuitslag wel of niet te accepteren een moeilijk politiek spel, zeker aangezien de regering vaak al voor de uitslag wordt gevraagd of zij gevolg aan de referendumuitslag zal geven. Echter, het verwijderen van het quorum stelt de regering in staat om haar besluit om de uitslag naast zich neer te leggen met argumenten over het opkomstpercentage en de intensiteit van de gevoerde campagne te legitimeren.

4. Slot

De gepresenteerde argumenten voor het afschaffen van de WRR kunnen deze beslissing van kabinet Rutte III niet dragen. De argumenten pleiten voor een verbetering van het referendumontwerp in de WRR en noodzaken niet de afschaffing van de wet.

Het afschaffingsbesluit lijkt een geschiedenis te volgen van ondoordachte besluitvorming waarbij beperkte aandacht is voor het ontwerp van de referenda. In het licht van deze geschiedenis is het dan ook niet onbegrijpelijk dat de WRR niet heeft gebracht waarop gehoopt werd. In plaats van te leren van de geschiedenis, wordt de trend doorgezet door wederom niet de mogelijkheden tot verbeteringen van het referendumontwerp te onderzoeken.

In dit betoog heb ik een aanzet gegeven voor inhoudelijke overwegingen omtrent de opkomstdrempel in de WRR. Mijn conclusie is daarbij dat raadgevende referenda met een adviserend karakter geen quorumeis zouden moeten bevatten. Indien het verwijderen van een quorumeis echter politiek onhaalbaar is, zou ik pleiten voor een uitkomstdrempel, lager dan een 'Russisch-vereiste' van 30%, met de kanttekening dat deze eveneens de representativiteit van de uitslag beïnvloedt. Op eenzelfde wijze moeten de mogelijkheden tot verbetering van de artikelen in de WRR over de wijze van aanvragen⁴² en de referendabele onderwerpen⁴³ onderzocht worden.

Een gebrekkige onderbouwing van besluitvorming is bij het afschaffen van een democratisch instrument op zijn minst kwalijk te noemen. Dat het invloed heeft op het vertrouwen in de politiek staat buiten kijf. Wantrouwen wordt daarnaast gevoed door de wil van de politiek om het besluit de WRR af te schaffen hoe dan ook door te zetten. Waarom moet een referendum over de

het Memorie van Toelichting op de WRR waarin staat: 'artikel 11 verplicht de regering'. (*Kamerstukken II*, 2005/06, 30372, 3, p.19).

³⁹ Broeksteeg en Van der Krieken 2017, p. 169.

⁴⁰ Rb. Den Haag 12 April 2017, ECLI:NL:RBDHA:2017:3667, rechtspraak.nl.

⁴¹ Uit het Tegelen arrest blijkt dat de rechter, daar zij geen wetgevingsbevoegdheid heeft, ook niet mag oordelen over de procedurevoorschriften om op die manier het wetgevingsproces te beïnvloeden. Rb. Den Haag 12 April 2017, ECLI:NL:RBDHA:2017:3667, rechtspraak.nl., para. 4.3; HR 19 November 1999, ECLI:NL:HR:1999:AA1056, *NJ* 2000/160 (*Tegelen*), para. 3.4.

⁴² Dit zijn de artikelen in hoofdstuk 6 en 7 van de WRR.

⁴³ Artikel 5 WRR.

afschaffingswet worden voorkomen als het kabinet zo zeker is dat het politiek en maatschappelijk draagvlak voor niet-bindende raadgevende referenda is uitgehold?

Maar het is nog niet te laat: het kabinet kan tot een nieuw inzicht komen en besluiten tot het verbeteren van de WRR of haar besluit beter onderbouwen. Ik wil dan ook met dit betoog niet beweren dat ik zelf een voorstander van referenda ben. Wel ben ik een sterke pleitbezorger voor onderbouwde en doordachte politieke besluitvorming. Maar wie is dat niet?

Are Referendums and Parliamentary Elections Reconcilable?

The Implications of Three Voting Paradoxes

SUZANNE ANDREA BLOKS*

Abstract

In representative democracies, referendum voting and parliamentary elections provide two fundamentally different methods for determining the majority opinion. We use three mathematical paradoxes – so-called *majority voting paradoxes* – to show that referendum voting can reverse the outcome of a parliamentary election, even if the same group of voters have expressed the same preferences on the issues considered in the referendums and the parliamentary election. This insight about the systemic contrarities between referendum voting and parliamentary elections sheds a new light on the debate about the supplementary value of referendums in representative democracies. Using this insight, we will suggest legal conditions for the implementation of referendums in representative democracies that can pre-empt the conflict between the two methods for determining the majority opinion.

Keywords: Democracy, Referendum, Elections, Majority Voting Paradoxes, Social Choice Theory

1. Introduction

The legitimacy of public decisions is not self-evident in Western democracies. This has been shown, for instance, by such instances as the decision to remain in or leave the EU, the decision to establish a political and economic association with Ukraine and the decision to accept EU migrant quotas: they have all caused public discontent. Traditionally, these decisions would be taken by representatives who are elected in the parliamentary elections of the representative democratic system, but the call for direct influence by citizens through referendums is becoming ever louder.¹

The role of referendums in the representative system currently puzzles many minds. It is debated whether this instrument of direct democracy could and should supplement the indirect system of representative democracies. What the systems share is that they both seek a majority opinion. A (qualified) majority outcome of the votes of representatives or citizens is seen as providing legitimacy.

In this paper, we will use mathematical paradoxes to show that the search for the majority opinion in referendums is fundamentally different from such a search in the representative system. We will

¹ The three issues mentioned have been the subject of referendums. The discussion in the United Kingdom about exiting the EU led to the Brexit referendum in June 2016, which has disrupted British politics. The decision to establish a political and economic association with Ukraine led to a referendum in the Netherlands in April 2016, which compelled the Dutch government to negotiate additional clauses in the EU-Ukraine Agreement before ratifying it. Lastly, the decision to accept the migrant quotas imposed by the EU was the subject of a referendum in Hungary in October 2016. This referendum was much despised by the representatives of the EU and other EU member states. Although an overwhelming majority of voters rejected the decision to accept EU migrant quotas, the referendum was not binding because turnout figures did not reach the turnout quorum of 50%.

discuss three so-called *majority voting paradoxes*: the *Ostrogorski paradox*,² the *Anscombe paradox*³ and *Nurmi's representation paradox*⁴. These paradoxes originate in the field of study called social choice theory, which can be regarded as a subfield of mathematics and economics.⁵ They pertain to how issues are presented to voters and focus on the merits of direct vs. representative democracy (Nurmi 1999, p.70).⁶

Specifically, the three majority voting paradoxes elucidate the contingent features of the direct system of referendum voting and the indirect system of parliamentary elections. They show that stepwise majority formation on full policy programmes (as in parliamentary elections that include coalition formation)⁷ can deliver results contrary to original majority preferences on separate issues (as voters might express in referendums). This is true even if the preferences of the individuals concerned do not change and all involved act perfectly rationally. As this is a somewhat unexpected and counter-intuitive result, they are called 'paradoxes'.

We will use this knowledge about the systemic differences between referendum voting and parliamentary elections to enhance the debate about the supplementary value of referendums in representative democracies. Some authors argue that the debate about the supplementary value of referendums revolves around a question of belief, because they think it impossible to weigh objectively the pros and cons and to determine the consequences of referendums for democratic values, such as citizen participation, the legitimacy of decision-making and the representative system (e.g. Voermans 2011, p. 469, but also Schutgens 2017, p. 141). However, knowledge about the systemic contrarities between referendum voting and parliamentary elections can help to underpin these beliefs with knowledge.

In the legal-political debate, there is a risk that the contingent systemic features of referendum voting and parliamentary elections are overlooked when the impact of referendums in the parliamentary system is studied on a case-by-case basis. It is, therefore, striking that the three majority voting paradoxes are presented in just a small part of the literature for a select club of mathematicians and political scientists,⁸ even though they were already discovered in the 1970s.

² The paradox cannot be found in any of Ostrogorski's works, but it is arguable that the author at least hinted at it in his two-volume treatise – see Ostrogorski (1902). Rae and Daudt (1976) were the first authors to present the paradox as a dilemma between two equivalently desirable procedures (direct and representative democracy) and coined the term 'Ostrogorski paradox'.

³ See Anscombe (1976).

⁴ See Nurmi (1999, p. 78).

⁵ For an introduction into social choice theory, see Arrow et al. (2002; 2011). Relevant parts about voting theory include parts 1 to 3 in the 2002 volume and part 8 in the 2011 volume.

⁶ Another well-known majority voting paradox is the Paradox of Multiple Elections, analysed and introduced by Brams, Kilgour and Zwicker (1998). Nurmi (1999, pp. 74f) shows how this paradox can be deduced by changing the Ostrogorski paradox. This paradox, however, does not concern the relation between referendum voting and parliamentary voting.

⁷ The models concern parliamentary elections in the broad sense of the term. Parliamentary elections in the narrow sense of the term, which refers to the voting process, are not typically concerned with establishing the majority opinion. Only in the broad sense of the term, when the notion also includes coalition formation and the hammering out of a government policy programme, are parliamentary elections aimed at establishing a policy programme that is preferred by an overall majority.

⁸ For classical political science literature in which mathematical models are applied to debates in political theory, see Riker (1982) and Pettit (2012). Riker builds his argument on the *paradox of voting* and Pettit uses the *discursive dilemma*. Furthermore, for the first and (to our knowledge) only application of voting paradoxes

In the first part of this paper, we will bring out again the three majority voting paradoxes, give them a good dusting off and analyse their implications for combining referendums and parliamentary elections. This analysis should make constitutional lawyers and politicians aware of the robust systemic differences between referendum voting and parliamentary elections, and enable them to ground their beliefs on knowledge about the effects of referendums in representative democracies on the legitimacy of public decisions and the power of citizens and representatives over decision-making.

In the second part of the paper, we will take the insights gained from the three paradoxes one step further: we will examine under what conditions the negative effects of the robust systemic differences between referendum voting and parliamentary elections can be prevented from arising. We will discuss the following conditions: (1) stipulating that referendums be *legally binding*, (2) using a *sequence of referendums* on the same issue, (3) introducing a *quorum requirement* in referendums and (4) *avoiding connections* between the referendum issues and the issues considered in parliamentary elections. This discussion should enhance an understanding of the effects of imposing such conditions on referendums and will lead to recommendations for the legislature if representative democracies are to be supplemented with referendums.

2. Three Voting Paradoxes

Referendums and parliamentary elections are based on different methods for determining the will of the voters.

Referendums are based on a direct method. Voters are given the opportunity to directly express their opinion on a specific issue; they cast a *disaggregated* vote. The majority opinion is determined per issue and, in the hypothetical case that all important issues are voted on in referendums, the resulting policy programme is constituted by the policies that have been favoured *issue-wise* in the referendums.⁹ We will say that the resulting policy programme or majority outcome is the joint outcome of the *disaggregated* votes.

By contrast, parliamentary elections are based on an indirect method. Voters cast their vote on a full policy programme, whereby they indirectly express their opinion on the specific issues. Voters add up their opinions on separate issues in a single parliamentary vote for a (party) candidate with a policy programme that reflects their opinions on most – or the most important – issues. The parliamentary

to the debate about referendums, see Nurmi (1998). Nurmi describes five paradoxes and touches on their implications. We will build on this paper by focussing on the three *majority voting paradoxes* and their implications for the legal-political debate about the supplementary value of referendums, by making a more in-depth analysis of the practical and legal implications, and by introducing new legal solutions.

⁹ The voters in referendums on European cooperation, like the Brexit and Ukraine referendums, are assumed to opt for the choice or the (party) candidate that has a similar opinion on the topic. Behaviour in a referendum is thus not dissimilar from voting in parliamentary elections where voters choose the policy programme or (party) candidate that agrees with their opinions on most or the most important issues. However, a prominent alternative theory of voting behaviour in EU referendums is the ‘second-order’ theory of elections. In referendums as ‘second-order elections’, national issues tend to dominate the referendum campaign and hence voters do not express their opinion on the specific issue in the referendum but ‘use their vote as a means of signalling their satisfaction or dissatisfaction with the government or to follow the recommendations of national parties.’ If the latter theory of voting behaviour applies, the distinction between the disaggregated and aggregated vote is not as clear-cut as described, because the referendum vote constitutes a second-order parliamentary vote (Hobolt 2006, p. 155).

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vote can also be called an *aggregated* vote, because voters combine their judgements on separate issues into one single vote for a (party) candidate that represents their preferred policy programme. The resulting policy programme or majority outcome can be said to be preferred *overall* by the majority of voters on the basis of their *aggregated* votes.¹⁰

The three majority voting paradoxes arise when the two methods lead to conflicting outcomes. In this section, we will discuss each of the three majority voting paradoxes and conclude with an answer to the question of why the paradoxes occur.

2.1. The Ostrogorski Paradox: the disadvantaged voter

The Ostrogorski paradox shows that the two methods of determining the majority vote on a full policy programme – parliamentary elections and the combination of referendum votes – may lead to conflicting outcomes. It shows that the *overall* majority outcome – the outcome based on the *aggregated* votes in parliamentary elections – can negate the *issue-wise* majority outcome – the outcome based on the *disaggregated* votes in referendums. In other words, while a political party may gain an overall majority in parliamentary elections, it might also be the case that none of its policies gains a majority when they are separately voted on in referendums. For example, if the policy issues were voted on in referendums in France, Emmanuel Macron’s party *La Republique En Marche!* might end up executing the policies of the *Front National*, the nationalistic and increasingly Eurosceptic party of Marine Le Pen, who was Macron’s rival in the presidential elections of 2017.

Table 1: The Ostrogorski Paradox

Voters	Issue 1	Issue 2	Issue 3	Parliamentary Vote
A (20%)	X	X	Y	X
B (20%)	X	Y	X	X
C (20%)	Y	X	X	X
D (20%)	Y	Y	Y	Y
E (20%)	Y	Y	Y	Y
Referendum Vote	Y	Y	Y	

Table 1 illustrates the Ostrogorski paradox. Suppose there are three policy issues and two political parties (X and Y). Also, suppose voters are divided into five groups (A, B, C, D and E), each comprising 20 percent of the electorate, and each voter votes for the party that they favour on most issues in parliamentary voting. Table 1 shows which political party is favoured by the groups of voters per issue. For example, voters in group A favour party X on Issue 1.¹¹

Consider the parliamentary voting outcome. Since voters vote for the party that they favour on most issues in parliamentary elections, groups A, B and C would vote for party X and groups D and E would vote for party Y, because the first three groups favour party X on 2 out of the 3 issues and groups D and E favour party Y on all issues. Thus, party X gains 60 percent of the votes and wins the parliamentary election.

However, if the issues are considered separately, party Y will get 60 percent of the votes on each issue and will, hence, beat party X on all issues. For example, voters in groups C, D and E, comprising 60

¹⁰ For a discussion of the disaggregated and issue-wise majority vote *versus* the aggregated and overall majority vote, see also Nurmi and Saari (2010, p. 32).

¹¹ Our presentation of the paradox follows the presentation by Nurmi (1997, pp. 47f.).

percent of the electorate, favour party Y on issue 1. Similarly, on issues 2 and 3, party Y is favoured by 60 percent of the electorate. This means that the joint outcome of the referendums (party Y wins on all issues) negates the parliamentary voting outcome (party X wins in parliamentary voting).¹²

It should be noted that this contradiction between the overall majority and issue-wise majority outcome occurs solely because a different method of determining the majority opinion is used and not because a different group of people cast a vote or because people have changed their opinions.

This paradox shows that the method of determining the majority opinion may constitute a decisive factor in the outcome; whether a political party or policy programme is voted on in parliamentary elections or in referendums could determine which political party or policy programme is dominant. Consequently, the question arises which majority outcome reflects the majority opinion: the overall majority outcome in parliamentary elections or the issue-wise majority outcome in referendums? For example, does the French population favour the liberal and pro-European policies of Macron's *La République En Marche!* given that Macron won the presidential elections and his party won the parliamentary elections, or is the French population rather conservative and Eurosceptic if the policies of Le Pen's *Front National* are favoured issue-wise in referendums?

In the debate about the supplementary value of referendums, this paradox provides a counter-argument against the view that referendums enhance citizens' power over decision-making. Proponents of referendums often argue that the direct and unmediated vote provides the highest degree of legitimacy for decisions and produces more accurate expressions of the citizens' will than a parliamentary vote electing representatives who make the decisions for them (see Butler and Ranney 1978, pp. 24f.). However, the Ostrogorski paradox implies that referendums do not necessarily give citizens more power, but a different kind of power; referendums allow citizens to cast a disaggregated vote besides their aggregated vote in parliament and, hence, complicate the voter calculus. Referendums create a new avenue for interpreting citizens' opinions. As the issue-wise majority outcome of referendums might negate the overall majority outcome in parliamentary elections, some voters might be better off without referendums. Take, for example, the voters in group A, who are in a minority on the majority of issues but would belong to the majority in parliamentary elections.

2.2. The Anscombe Paradox: the disadvantaged governmental coalition

Closely related to the Ostrogorski paradox is the Anscombe paradox, which specifically reveals the tension between coalition formation and referendum voting.¹³ It explains why holding several referendums might lead to frustration among the supporters of the dominant parliamentary coalition. 'In a nutshell, it says that a majority of voters [represented by the governmental coalition] could be in

¹² While the paradox is presented in terms of a choice between two political parties, the paradox also applies to multi-party systems. The paradox can be adjusted to fit a system with more political parties, e.g. by changing the vote for party X/Y into a dichotomous yes/no vote.

¹³ Although the Ostrogorski and Anscombe paradoxes look similar, they are not equivalent. Nurmi and Saari (2010, p. 34) showed that every instance of the Anscombe paradox is an instance of the Ostrogorski paradox. But not every instance of the Ostrogorski paradox is an instance of the Anscombe paradox. Nurmi (1999, p. 73f.) gives an example of an Ostrogorski paradox that is not an instance of the Anscombe paradox. In Nurmi's example, the parliamentary majority outcome negates the issue-wise majority outcome, but only one voter is on the losing side on a majority of issues.

a minority (i.e. on the losing side) on a majority of issues involving dichotomous choices’ (Nurmi 1997, p. 34).

Table 2: The Anscombe Paradox

	Voters	Issues 1	Issue 2	Issue 3
Coalition	A (20%)	Yes	Yes	No
	B (20%)	Yes	No	Yes
	C (20%)	No	Yes	Yes
Opposition	D (20%)	No	No	No
	E (20%)	No	No	No
Referendum	Outcome	No	No	No

Table 2 presents the Anscombe paradox.¹⁴ Suppose there are again three policy issues and five groups of voters (A, B, C, D and E), each comprising 20 percent of the electorate. This time voters cast a yes/no vote. Table 2 shows the votes of each group per issue. Voters in group A vote ‘yes’ on issues 1 and 2 and ‘no’ on issue 3. The referendum outcome comprises the majority per issue. On all three issues the majority of voters (60 percent) vote ‘no’, which will be the referendum outcome.

Voters in groups A, B and C, a majority of voters (comprising 60 percent of the electorate), are on the losing side two out of the three times, while voters in groups D and E, a minority of voters (comprising 40 percent of the electorate), are always on the winning side.

Now, the point of the paradox is that even though a coalition supported by a majority of voters (groups A, B and C) would approve of all three issues, they might lose on all three issues in a referendum vote. To see this, suppose that the five groups of voters correspond to parties, each gaining 20% in parliamentary elections. In that case, no party has an overall majority in parliamentary elections and coalition formation is needed. Parties D and E are happy to enter into a coalition with each other as they agree on all policy issues. However, none of the other three parties wants to join them in a coalition as they disagree with parties D and E on the majority of issues. Therefore, the only possible majority coalition is a coalition with parties A, B and C. Parties A, B and C reach a coalition agreement in which each party renounces only 1/3 of their programme (i.e. one issue), resulting in a policy programme in which all policy proposals are accepted. Hence, this majority coalition would push through a policy programme that, on each policy issue separately, is against the will of the majority of voters.

This paradox addresses the concern of opponents of referendums that referendums might threaten the power and prestige of elected authorities (see e.g. Butler and Ranney 1978, p. 34). The paradox shows that not only may a single referendum outcome run counter to the carefully negotiated consensus of governmental coalitions but also that the combination of several referendum votes might lead to a policy programme that negates the policy programme carefully negotiated by the dominant parliamentary coalition. This might threaten the power and prestige of representatives. The significance of this paradox lies in the fact that this threat to a majority government arises only because a voting system is used that is fundamentally different from the voting system used in parliamentary elections, and not because different citizens with different opinions have cast their vote.

¹⁴ Our presentation of the paradox follows the presentation by Saari (2008, p. 31).

2.3. Nurmi’s Representation Paradox: conflict for representatives

Nurmi’s representation paradox shows that representatives might face a norm conflict when the two methods of determining the majority opinion produce conflicting outcomes. With conflicting majority outcomes, representatives have to decide whether they want to represent either their supporters or the whole of people. In the former alternative they use the method determining the overall majority outcome – that is, they listen to the parliamentary voting outcome. In the latter alternative they follow the issue-wise majority opinion and, thus, respect the referendum results.

Table 3: The Representation Paradox

	Party A (2/3)				Party B (1/3)		
	MP1	MP2	MP3	MP4	MP5	MP6	Referendum Vote
Yes	5	5	5	5	11	11	42
No	6	6	6	6	0	0	24
Parliamentary Vote	No	No	No	No	Yes	Yes	

Table 3 presents Nurmi’s representation paradox.¹⁵ Suppose that there are two political parties (party A and party B) and that parliament consists of 6 members. Party A has 4 members in parliament, which is 2/3 of the parliamentary seats, and party B provides the other 2 members of parliament, which is 1/3 of the seats. Assume that this proportionally reflects the opinion of the electorate. That is, 2/3 of the electorate favours party A and 1/3 favours party B. Furthermore, suppose that the electorate consists of 66 voters. Given our proportionality assumption, this means that each group of 11 voters is represented by one member of parliament.

Suppose that a referendum is held in which the voters can choose either ‘yes’ or ‘no’. Table 3 shows that 6 voters out of the groups of 11 voters that elected a member of party A vote ‘no’, the other 5 voters choose ‘yes’. The voters in the groups for the members of party B unanimously choose ‘yes’. This gives a majority of 42 ‘yes’ votes out of the 66 votes in a referendum.

However, if in parliamentary voting the members vote in accordance with the majority opinion of their supporters, the opposite is the result. Assuming that they know the distribution of opinions of their supporters, the members of party A (members 1 to 4) will vote ‘no’, since the majority of supporters for each member prefer ‘no’ and, correspondingly, the majority of supporters for party A (24 of the 44 supporters) prefer ‘no’. This results in ‘no’ as the outcome of parliamentary voting with a 2/3 majority.

The significance of this paradox is ‘in the shadow it casts on the institution of consultative referendum’ (Nurmi 1999, p.78). In consultative referendums, representatives are faced with the decision whether the parliamentary vote or the referendum vote is more decisive. The paradox shows that this decision may create a norm conflict: are they supposed to represent the whole people or just their own supporters? As Nurmi has explained: ‘If the former alternative is the case, then the legislators have clear moral reasons to honor the referendum outcome. If, however, the MPs [members of parliament]

¹⁵ We use a version of Nurmi’s representation paradox that is slightly different from the versions presented by Nurmi himself. Nurmi presents the paradox with 200 members of parliament (1999, p. 77) and with 9 members of parliament (1997, pp. 48ff.; 1998, pp. 336ff.). We have presented the paradox with 6 members of parliament because this results in a table that is slightly easier to comprehend. Furthermore, note that this paradox could also have been formulated in terms of more than two political parties. Party A would then constitute the coalition parties while Party B would encompass the opposition parties.

represent their own supporters, then the referendum outcome is of no consequence to their actions' (Nurmi 1997, p.49). The paradox implies that non-binding referendums might enhance the power of representatives instead of citizens' power, as they provide representatives with an additional avenue for interpreting the majority opinion. However, this power goes hand in glove with a norm conflict.

2.4. Why do the paradoxes occur?

As the paradoxes produce surprising and maybe even counter-intuitive results, one might wonder: why do these paradoxes occur? To answer this question, it is useful to understand the similarities between the three voting paradoxes and Simpson's paradox. Simpson's paradox is a statistical paradox that was first addressed in a paper by Edward H. Simpson (1951, pp. 238ff.). The paradox shows that the conclusions drawn from a dataset may reverse when switching between interpreting the data as a whole (the *aggregated* dataset) and interpreting the data as a partitioned dataset (the *disaggregated* dataset). An actual occurrence of this paradox was observed by Cohen and Nagel (1964) in a comparison of the number of tuberculosis deaths in New York City and Richmond, Virginia, during the year 1910. Whereas the overall tuberculosis mortality rate was lower in New York than in Richmond, the opposite was observed when the data was divided in the racial categories of white and non-white people: New York had a higher tuberculosis mortality rate in each category than Richmond.

The three voting paradoxes also show this conflict between the conclusion drawn from the dataset as a whole and the dataset in its partitioned form. In the Ostrogorski and Anscombe paradoxes, the data of voter preferences is partitioned into issue-wise preferences. In Nurmi's representation paradox, the voter preferences are categorised according to the political party or the member of parliament that represents the voter.

Now, we can return to the question of why the paradoxes occur. There is quite a clear answer to this question: the paradoxes arise either because (1) the disaggregated dataset establishes connections in the dataset that the aggregated dataset cannot recognise and, hence, cannot respect, or because (2) the disaggregated dataset cannot recognise and, hence, cannot respect the connections among the subcategories that the aggregated dataset does recognise and respect. The first reason applies to Nurmi's representation paradox. In this paradox, the party affiliation of voters is recognised and respected in the parliamentary vote, but not in the referendum vote. The second reason applies to the Ostrogorski and Anscombe paradoxes: in issue-wise voting (referendums) the connection among separate issues cannot be recognised and, hence, cannot be respected, while this connection may very well play a role in the parliamentary vote.

We will continue our discussion by focussing on the Ostrogorski and Anscombe paradoxes, and the inability of issue-wise voting to recognise and respect connections among issues.

Table 4: Saari's Example

(a) The candidates

Engineering	Social Sciences	Sciences
David	Harry	Fred
Elaine	Joyce	Gloria

(b) Dean Votes

	Engineering	Social Sciences	Sciences
Dean 1	Elaine	Harry	Fred
Dean 2	David	Joyce	Fred
Dean 3	David	Harry	Gloria
Majority Outcome	David	Harry	Fred

The inability to respect relations among separate issues is illustrated by an example due to Saari (2008, pp.40ff.). Suppose a university panel should be assembled. Each of three schools put forward two candidates. To ensure an appropriate balance across disciplines, one candidate from each school will be selected. Table 4(a) shows the candidates and schools.

The deans of the schools vote for one candidate from each school's list and the majority winner from each list is elected. Table 4(b) shows the votes of the three deans. Each dean has voted for a panel composition of at least one man and one woman. Assume that each dean also prefers a panel composition of mixed gender. The issue-wise majority outcome, however, results in a panel of men only. As the issue-wise majority outcome does not respect the extra condition of mixed gender, each dean would be dissatisfied with this outcome.

By contrast, if the university panel was assembled on the basis of a parliamentary voting system, the deans would have voted for a full panel composition and would, hence, have only chosen a panel composition of mixed gender.

The upshot of this is that the issue-wise majority vote may produce a joint outcome that *nobody* really likes and that violates imposed conditions for the relations among the separate issues which are taken into account in the parliamentary vote.¹⁶ In the Ostrogorski paradox, voters are asked to give a party preference for each party separately, while voters usually tend to base their party preference on their opinions about several issues. In the Anscombe paradox, the connection of belonging to the majority coalition is neither recognised nor respected in the issue-wise majority vote. 'Consequently, the outcomes are connected to the majority or minority party strictly by coincidence; the [issue-wise] majority vote has stripped away all membership connections' (Saari 2008, pp. 42f.).

The Ostrogorski and Anscombe paradoxes have a similar structure to the *discursive dilemma*, which has motivated research into judgement aggregation.¹⁷ The discursive dilemma also arises 'when, in a

¹⁶ By using preferential rankings it can be shown that the inability to respect connections among the separate issues results in an issue-wise majority outcome in the paradoxes that violates the mathematical relation of transitivity in preferences. Even though the individuals have transitive preferences, the issue-wise majority outcome might be cyclic. By contrast, the overall majority outcome will always be transitive as voters vote for the full programme and, hence, will incorporate their transitive preferences into their vote.

¹⁷ For an introduction into judgement aggregation, see List and Puppe (2009) but also Endriss (2016). Judgement aggregation concerns the aggregation of belief information. It provides a relatively general framework, in which the social choice framework of preference aggregation can be embedded. There are different ways to embed the social choice framework into the judgement aggregation framework. For an embedding into a formula-based

group, each individual consistently makes a judgement, or expresses a preference, (in the form of yes or no) over specific propositions, and the collective outcome is in some respect inconsistent' (Pigozzi 2006, p. 119).¹⁸ However, while this inconsistent collective outcome is a purely logical relationship among the propositions in the discursive dilemma, it is a compound majority decision that binds voters and issues in the Ostrogorski and Anscombe paradoxes (see Pigozzi 2010, but also Grandi 2014).

To conclude, Nurmi's representation paradox is troubling because the preferences of voters are connected to the party affiliation of the voters. Such a connection may only be reasonable if the referendum issue is also considered in the policy programmes of the political parties. The Ostrogorski and Anscombe paradoxes 'are troubling because we expect connections across pairs, as identified with voter preferences, to survive the decision process. Instead, the [issue-wise] majority vote completely severs all connections' (Saari 2008, p. 42), while these connections are taken into account in the overall majority vote. Because referendums delink the issues, referendums in representative democracies are not just an *additional* instrument, but a *different* instrument through which citizens can make their voice heard. As Nurmi (1997, p. 47) says, referendums 'are both an additional avenue for expressing one's opinion about specific issues and a complication in the voter calculus.'

3. Practical Implications

As we dusted off the three majority voting paradoxes, we have clarified the systemic differences between referendum voting and parliamentary elections, and enhanced our understanding of the consequences of implementing referendums in the representative system. Although the negative consequences suggest that caution should be exercised when combining parliamentary elections with referendums, they do not necessarily lead to the conclusion that the parliamentary system cannot and should not be supplemented by the direct voting system of referendums. Therefore, legislators and politicians might ask how they can use this knowledge of the systemic differences when deciding to implement referendums in a representative system. This section purports to address this question by formulating conditions that could prevent the paradoxes and, hence, the negative consequences of the paradoxes from arising. We will discuss four possible conditions.

First, we will argue that stipulating the legally binding nature of referendums could remove the representatives' norm conflict of Nurmi's representation paradox, but this is insufficient to deal with the Ostrogorski and Anscombe paradoxes.

Second, we will argue that the sequential use of referendums could resolve the norm conflict arising from Nurmi's representation paradox when the referendums concern bills that are approved of by a majority in parliament. However, sequential referendums cannot be a solution to the Ostrogorski and

framework of judgement aggregation, see Dietrich and List (2007, pp. 26ff.). For an embedding into a constraint-based framework of judgement aggregation, see Grandi and Endriss (2011).

¹⁸ In particular, the discursive dilemma and the Ostrogorski and Anscombe paradoxes are essentially equivalent to the *paradox of voting*. The paradox of voting, also known as Condorcet's paradox, shows that a voter profile with three or more voters and consistent voter preferences can lead to a majority cycle, i.e., an inconsistent majority outcome. Nurmi and Saari (2010) proved that with a renaming of the alternatives the Ostrogorski paradox can be translated into the paradox of voting and *vice versa*. Saari (2008, ch. 2) showed that the Anscombe paradox and the discursive dilemma can be translated into the paradox of voting. List and Pettit (2002, pp. 89ff.) showed that the discursive dilemma is a generalisation of the paradox of voting.

Anscombe paradoxes or to Nurmi's representation paradox when the policy proposal is rejected by a majority in parliament but is accepted in a referendum.

Third, as stipulating that referendums be legally binding or using referendums sequentially cannot resolve the Ostrogorski and Anscombe paradoxes, we will examine whether a quorum requirement could. We will discuss Wagner's (1983) result that an approval quorum of 75% for referendums could prevent the Anscombe paradox from arising, but show with Deb and Kelsey's (1987) result that this is insufficient to deal with the Ostrogorski paradox because of necessary additional requirements.

Fourth, we discuss our last possible condition, which aims at avoiding connections between referendum issues and the policy programme elected in parliamentary elections. We argue that the Ostrogorski and Anscombe paradoxes can be prevented from arising if referendums are only implemented when the referendum issues do not have a connection to the policy programme elected in parliamentary elections. Suggestions will be made on how this condition can be satisfied.

Before going into the practical implications, we would like to deflect the charge that the occurrence of these paradoxes is not frequent at all and that it might, therefore, not be worth basing conditions for the application of referendums on the results of these paradoxes. The question of the frequency of the paradoxes can only be answered if more information about voter preferences is available. But, irrespective of the frequency of their occurrence, the paradoxes show robust systemic differences and negative consequences that can (partially) explain, *inter alia*, frustration of citizens and representatives following the Brexit,¹⁹ Ukraine²⁰ and Hungarian migrant quotas²¹ referendums.

3.1. Binding Referendums

Nurmi (1997, pp.25ff., p.51) argues that the problems arising from combining referendums with parliamentary elections 'can be overcome through the requirement that the referenda be binding, i.e. not consultative'. Specifically, he concludes that requiring a binding nature is a way of handling his representation paradox. But would stipulating that referendums be legally binding also prevent citizens' frustration resulting from an Ostrogorski paradox and the problems of majority coalitions in parliament following from an Anscombe paradox?

The problem with non-binding referendums is that they allow the two methods of determining the majority outcome to coexist and leave it to the government to decide, *ex post*, the authoritativeness of either method. Non-binding referendums give the government, *de jure*, two options for interpreting the referendum results: the government can either accept the referendum outcome and, thus, consider the issue-wise majority to be the most authoritative or reject the outcome and, thus, regard the overall majority outcome as the most authoritative.

The Ukraine referendum shows that non-binding referendums even open up a third path, the legality of which is – at least in the Netherlands – completely excluded from any judicial scrutiny. The Dutch government chose neither to accept nor to reject the outcome of the Ukraine referendum directly, as it did not immediately submit a legislative proposal to accept or withdraw the Approval Act on the EU-

¹⁹ The referendum of the United Kingdom on European Union membership, June 2016.

²⁰ The referendum of the Netherlands on the approval of the Association Agreement between the European Union and Ukraine, April 2016.

²¹ The Hungarian referendum on the migrant relocations plans of the European Union, October 2016.

Ukraine Association Agreement.²² Instead, Prime Minister Rutte invented his so-called *desire path* by using the referendum outcome as a basis for further negotiations on the Association Agreement in the European Council. The legality of this path was contested at the The Hague district court by *Stichting Forum voor Democratie* (case *Stichting Forum voor Democratie v. De Staat der Nederlanden*, 12th April, 2017). The judge held, however, that he was not allowed to decide on the lawfulness of the government's actions, because he ought not to interfere with this process of political decision-making.²³

By leaving it to themselves to decide which method of analysing the majority opinion is the most authoritative, governments face the norm conflict of Nurmi's representation paradox in non-binding referendums. For example, did the British government in the Brexit referendum represent their supporters and were their actions, therefore, legitimised by the parliamentary elections? Or, as Theresa May clearly chose to see it, did the government have to represent the whole population – assuming that the referendum majority was representative of the population's opinion – and listen to the referendum outcome? With the 2019 local elections in the UK, this picture becomes even more complicated. As Brexit was among the main themes of the election campaign, it is not clear whether the Conservatives' defeat should be interpreted as a vote against a 'hard' Brexit or as a lack of support for their full policy programme.

The coexistence of the two methods and the political discretion on the authoritativeness of either method in non-binding referendums causes uncertainty among citizens, because it is only after the referendum that they find out whether their vote was authoritative. Furthermore, the political choice of either method is likely to lead to frustration among citizens. On the one hand, large groups of voters might feel frustrated when the majority opinion is established by analysing the issue-wise votes in referendums, because then their vote in parliamentary elections is not reflected in political decisions. On the other hand, large majorities of voters might feel frustrated when the decisions are based on the overall majority outcome in the parliamentary elections instead of the issue-wise majority opinion in the referendums, because then their referendum vote appears to be useless.

In referendums with a legally binding nature it is determined, *de jure*, that the referendum outcome is more authoritative than the outcome of the parliamentary elections and the acceptability of inventive desire paths would be under legal scrutiny. This takes away the norm conflict of Nurmi's representation paradox, because if referendums have a legally binding nature then the law prescribes that the

²² Article 11 of the (now abolished) Dutch Consultative Referendum Law pointed out that there are two options when the majority rejects its legislation in a non-binding referendum: (i) accepting the referendum outcome and submitting a legislative proposal to withdraw the legislation, or (ii) rejecting the referendum outcome and presenting a legislative proposal to enact the legislation. The Article did not define by whom the legislative proposal should be submitted. On the basis of Art. 82 of the Dutch Constitution, both the government and the Second Chamber can submit a legislative proposal. Legislative proposals of the Second Chamber are also called initiative proposals (*initiatiefvoorstellen*). In the case of a rejecting referendum outcome it is most natural that a governmental legislative proposal rather than an initiative proposal is submitted. This is also reflected in the explanatory memorandum to the law, which states: 'artikel 11 verplicht de regering' [Article 11 obliges the government] (*Parliamentary Papers* 2005/06, p. 19).

²³ Article 81 of the Dutch Constitution allots responsibility for enacting Acts of Parliament solely to the Government and the States General. In the *Tegelen* judgement (Supreme Court of the Netherlands, 19th November, 1999, para. 3.4) it was ruled that this also prevents judges from deciding on the procedures for enacting laws. Judging on the procedures would allow a judge to influence the legislative procedure by ruling whether the procedures have been followed lawfully and, if not, what consequences should result from that.

referendum outcome should be honoured and, thus, that the whole people should be represented. The legally binding nature prevents representatives from adapting their ideology of representation to the situation and, hence, takes away any uncertainty among citizens concerning the voter calculus. However, determining that the disaggregated vote is more authoritative goes hand in glove with reducing the strength of the parliamentary vote. With legally binding referendums, majority government coalitions have to stick to the referendum results that frustrate their carefully negotiated policy programme, as in the Anscombe paradox.

Thus, stipulating that referendums be legally binding is sufficient to take away the government's norm conflict and citizens' uncertainty concerning the authoritativeness of their vote, but it also allows no leeway when the referendums disrupt the representative system. The legally binding nature magnifies the problems a majority coalition is facing when it is in a minority on a majority of issues, as in the Anscombe paradox. Therefore, it cannot be a complete solution to the problems arising when combining referendums with parliamentary elections.

Besides, even if stipulating the legally binding nature of referendums would be a solution to the problems arising from the paradoxes, it may be a politically unfeasible requirement, especially in countries with constitution that do not allow for legally binding referendums.²⁴ For example, Article 81 of the Dutch Constitution confers legislative power to the Government and the States General jointly and, thereby, excludes citizens from enacting legally binding acts. As a consequence, Article 81 of the Dutch Constitution has to be amended to introduce legally binding referendums. However, passing the constitutional amendment procedure in the Netherlands is notoriously difficult. A constitutional amendment has to be passed twice in both the Upper and Lower House of Parliament and has to be ratified twice by the government. This is referred to as the 'two readings'.²⁵ Three times an amendment of Article 81 of the Dutch Constitution has been proposed in order to allow for binding referendums, and each time the bill failed to acquire the support of a qualified majority of two thirds in either the Upper or Lower House of Parliament in the second reading.²⁶ The question is when, if ever, Dutch politicians will be willing to consider a new constitutional proposal for binding referendums.

²⁴ In Europe, these countries include Belgium, Finland, the Netherlands and the United Kingdom.

²⁵ The first reading takes the form of the procedure for a normal Act of Parliament: the constitutional amendment has to be supported by a simple majority in each House of Parliament. After the publication of the bill for the constitutional amendment, the Lower House has to be dissolved. Usually, the dissolution of the Lower House is timed such that it coincides with the periodic general elections of the Lower House and the formation of a new government. In the second reading, each House of Parliament has to support the constitutional amendment with a qualified majority of two-thirds for the amendment to pass. The process of amending the Dutch Constitution is determined by Article 137 of the Constitution. For more information, see Besselink (2007).

²⁶ The first bill for amending Article 81 of the Dutch constitution was rejected in second reading in 1998, leading to the resignation of Cabinet Kok-II. The second bill for amending Article 81 of the Dutch Constitution was submitted to the first reading in 2000 and failed to acquire the required support in the second reading in 2004. The third bill for a constitutional amendment was rejected in second reading in November 2017 under Cabinet Rutte-III. This government also repealed the Consultative Referendum Law in response to the turmoil that arose after the first application of the law in the referendum on the EU Association Agreement with Ukraine. For more information, see Breunese (2013, pp. 346ff.) and Bovend'Eert (2018).

3.2. Sequential Referendums

As an alternative to stipulating that referendums be legally binding, an instance of Nurmi's representation paradox could be avoided by holding several referendums on the same issue. We call this: the sequential use of referendums.

Two instances of Nurmi's representation paradox should be distinguished. In the first instance, a policy proposal is accepted by a majority in parliament but is rejected in a referendum.²⁷ The members of parliament face the consequences of Nurmi's representation paradox: they have to choose between representing their own supporters (i.e., ignoring the referendum outcome) and representing the whole people (i.e., honouring the referendum outcome). The second instance of Nurmi's representation paradox is the mirror image of the first instance in terms of the referendum result and the parliamentary voting outcome. This instance of Nurmi's representation paradox concerns a policy proposal that is rejected by a majority in parliament but is accepted in a referendum.²⁸ Again, members of parliament face a norm conflict, as the referendum result and the outcome of the parliamentary vote suggest different actions.

Sequential referendums can be a solution to the first of these two instances of Nurmi's representation paradox. In the first instance, members of parliament face a choice between honouring the parliamentary voting outcome that approves of the policy proposal and honouring the referendum outcome that rejects the policy proposal. Now, with a practice of sequential referendums, choice can be avoided as a (revised) policy proposal can be submitted to a new referendum until it is also accepted in a referendum vote. This is common practice in Switzerland, where the Parliament has the option to submit a bill, in a revised version, to a new referendum when the original bill is rejected in a referendum. The revision of the bill should be based on the results of a consultation of the citizens about their reasons for rejecting the bill. There is no limit to the number of times that the Swiss Parliament can revise and submit the revised bill to a new referendum. That is, the Parliament can continue this process of revising and resubmitting until the bill is accepted. However, the sequential use of referendums is not likely to be exhausted, as resubmitting costs time and money.

Hence, the practice of sequential referendums on parliamentary bills, that have been approved of by parliament, would be an alternative to stipulating that referendums be legally binding in order to prevent the norm conflict of Nurmi's representation paradox from arising. For example, submitting the re-negotiated EU-Ukraine Association Agreement to a referendum could have contributed to the legitimacy of Rutte's inventive desire path, provided that the second referendum on the agreement had resulted in the approval of the referendum voters. It should be noted that referendums have a *materially* binding nature with such a practice of sequential referendums, as government is expected to honour the referendum result. When a policy proposal is rejected in a referendum, government is expected to refrain from implementing the policy proposal until a revised version is accepted in a referendum.

By contrast, the second instance of Nurmi's representation paradox cannot be avoided by submitting a revised proposal to a new referendum as, in this instance, the policy proposal is already approved of

²⁷ Note that we can easily construct this instance of the representation paradox from Table 3 by changing the 'yes' votes into 'no' votes and *vice versa*.

²⁸ This instance is exemplified by Nurmi's representation paradox as presented in Table 3.

in the referendum.²⁹ The Swiss 2009 initiative to ban minarets³⁰ and the Swiss 2014 anti-mass migration initiative³¹ are examples of policy proposals that were not supported by a majority in parliament but accepted in a referendum.

In theory, the members of parliament could avoid the paradox by revising the policy proposal until the majority of members in parliament also approve of the proposal. Such a revised proposal is, however, likely to face legitimacy issues when it is a substantial weakening of the initial proposal, as the question may arise whether the revised proposal can still live up to the wishes that the people expressed in the first referendum.

Alternatively, it may in exceptional circumstances be legitimate to overturn the referendum result and call for a second referendum. The Swiss Supreme Court has declared invalid several results of cantonal and local referendums over the past 100 years and since 2007, the Court has the right to rule on the validity of national referendums. In April 2019, the Swiss Supreme Court used this right to declare the outcome of a national referendum invalid for the first time in Switzerland's recent history. The referendum rejected by 50.8% to 49.2% the government's plans to reduce the tax burden for married couples.³² In its landmark ruling, the Swiss Supreme Court overturned the referendum result on the grounds that the information given to the voters was intransparent and incorrect. In information provided to the electorate prior to the referendum, the federal government had said that 80,000 married couples were negatively affected by the tax burden. But following the referendum vote, the government conceded that it had seriously underestimated the numbers and said that, in fact, 454,000 married couples were affected by the tax burden. Although the Swiss Supreme Court's verdict has led to controversy, it may resonate in the United Kingdom, where Remain campaigners have consistently argued that voters were not adequately informed.³³

As revising a policy proposal that is accepted in a referendum or directly overturning a referendum result is politically feasible in only exceptional circumstances, stipulating the binding nature of referendums on policy proposals that are rejected by parliament is a more general solution to prevent Nurmi's representation paradox from arising. In the world's most prominent referendum democracy, this recommendation is already followed. Consequently, the 2009 ban on minarets and the 2014 anti-mass migration initiative have been implemented, albeit in a lighter version.

Whereas the sequential use of referendums can prevent the instance of Nurmi's representation paradox from arising, in which the policy proposals is supported by a majority in parliament, such a

²⁹ Note that there is an anti-symmetry between the acceptance and the rejection of a policy proposal in a vote. The legitimacy of public decisions requires parliament to search for a policy proposal that is accepted in both the parliamentary vote and the referendum vote. Changing a policy proposal in order to have it rejected in a referendum vote is an unconstructive approach to law-making.

³⁰ The minaret initiative was launched by politicians from the Swiss People's Party and the Federal Democratic Union. It sought a constitutional ban on the building of new minarets on mosques.

³¹ The anti-mass migration initiative was launched by the national conservative Swiss People's Party. It aimed at limiting immigration through quotas.

³² As the income of married couples is taxed jointly and married couples get tax-free allowance over the combined income, they pay more tax than unmarried cohabiting couples who are taxed separately and therefore each have a tax-free allowance. The referendum concerned the government's plans aimed at ending this extra charge on married couples compared to unmarried cohabiting couples by allowing married couples to pay the tax that is calculated over their incomes separately.

³³ For newspaper articles about the Swiss Supreme Court's historic ruling, see Alder (10th April, 2019), Geiser (10th April, 2019), Kleck (11th April, 2019) and North (23rd April, 2019).

referendum practice cannot prevent the Ostrogorski and Anscombe paradoxes from arising, as these paradoxes may arise with respect to each referendum in the sequence. Since stipulating that referendums be legally binding also cannot prevent the Ostrogorski and Anscombe paradoxes from arising, we will discuss a potential solution to the latter two paradoxes in the next section.

3.3. Quorum requirement

One way of dealing with the Ostrogorski and Anscombe paradoxes might be to introduce an approval quorum in referendums. An approval quorum singles out the *status quo*, i.e. no change in legislation or states of affairs, as the favourite by requiring a qualified majority of votes for change. It requires that the majority in the outcome of the referendum consists of a certain percentage of the electorate. Another type of quorum requirement is a participation quorum. This quorum does not impose a percentage requirement on the majority outcome but on the number of participants in the referendum: it requires that a certain percentage of the electorate has participated in the referendum.³⁴

The Anscombe paradox can be avoided by imposing an approval quorum requirement of 75% in referendums. Wagner (1983) has shown ‘that if instead of the simple majority rule one would require a 3/4 majority for a proposal to be adopted, then it cannot be the case that a majority of voters is on the losing side on a majority of adopted proposals’ (Nurmi 1999, p.83). That is, when a policy proposal is only adopted if a 3/4 majority votes ‘yes’ in the referendum on the proposal, then there is no majority coalition that disagrees with the majority of adopted proposals.

The argument contains an important nuance: Wagner is only concerned with *adopted* proposals. Consider the case in which 63% of the voters are in favour of a proposal. Under the three-fourths rule the proposal would not be adopted (63% is less than 75%) but clearly a majority of 63% of the voters disagrees with the result. Wagner is not concerned with eliminating this ‘majority loss’ for rejected proposals. This makes sense in legislative settings in which there is a *status quo* that is maintained when there is no qualified majority for change.

In the Anscombe paradox as presented in Table 2, this subset of adopted proposals is empty as the referendum outcome on all three issues is ‘no’. Thus, the Anscombe paradox as presented in Table 2 is not a good example to illustrate that Wagner’s three-fourths rule works. However, Table 2 is only one example of an Anscombe paradox. The paradox can be constructed in many more ways: with a different number of voters, a different number of issues and different voter preferences. The strength of Wagner’s rule is that it works for any number N of voters that cast a yes/no vote on a set of K proposals and, hence, for any possible construction of an Anscombe paradox (see Wagner 1983, p. 305).

The Ostrogorski paradox can also be avoided by requiring an approval quorum of 75% in referendums. However, this only works if, in addition, there is a majority threshold in parliamentary voting.

Let us denote the majority threshold on the parliamentary level by k . If $k=3/4$, each voter has to agree with at least 3 out of the 4 issues in order to become a voter for the political party with that policy

³⁴ In fact, an approval quorum presupposes a participation quorum, for if the majority should encompass $x\%$ of the electorate then also *at least* $x\%$ of the electorate must have participated in the referendum - see e.g. Bloks (2018, p. 87).

programme. Let us denote the majority threshold on a referendum level by g . If $g=3/4$, then 75% of the voters have to vote 'yes' in order for the policy proposal in the referendum to be accepted.

Deb and Kelsey (1987) have established a relationship between a majority threshold in parliamentary voting (k) and a majority threshold in referendum voting (g), which is: $g < 1/(4k-2)$. If g is strictly smaller than $1/(4k-2)$, the Ostrogorski paradox can occur. From this relation between g and k it follows that when k is higher, a lower g is sufficient to avoid the Ostrogorski paradox. In other words, the higher the majority threshold in parliamentary voting, the lower the threshold in referendum voting has to be in order to avoid the Ostrogorski paradox.

We will look at a few examples. If $k=3/4$ the required value for g is 1. This means that voters will only vote for a political party in parliamentary elections when they agree with at least 75% of the issues, and that the quorum requirement in the referendums should be 100%. For values of k higher than $3/4$, the required value of g is less. If $k=7/8$ it is $g=2/3$, and if $k=5/6$ it is $g=3/4$, the latter meaning that the quorum requirement in referendums should be 75%. For values of k less than $3/4$, the Ostrogorski paradox is always possible, since $k < 3/4$ requires $g > 1$, but a majority support of more than 100% is impossible.

Thus, the Ostrogorski paradox can be avoided by imposing an approval quorum of 75% in referendums, but then the support for the governing party has to be very cohesive as voters have to agree with more than 83% ($5/6$) of the issues when supporting the party. Another possibility is, for example, the requirement that voters agree with 75% of the issues when they vote for a party in parliamentary elections and that a policy is only accepted in a referendum when 100% of the voters agree.

Although an approval quorum of 75% provides a mathematical solution to the Anscombe paradox and an approval quorum in referendums in combination with a cohesion requirement in parliamentary voting provides a mathematical solution to the Ostrogorski paradox, the question is whether these solutions are practically feasible and beneficial.

Firstly, an approval quorum can have other negative consequences, which means that these solutions replace one problem with another. The mathematician and social choice theorist May proved that every rule, which is not based on a simple majority decision, will lead to problems: it 'will either fail to give a definite result in some situation, favor one individual over another, favor one alternative over the other, or fail to respond positively to individual preferences' (May 1952, p.683).³⁵ An approval quorum is a deviation of the simple majority rule that creates a bias in favour of the *status quo*.

The consequences of an approval quorum are less obvious than the consequences of a participation quorum. It is well-known that a participation quorum can lead to voter abstention as some *status quo* voters choose to abstain from voting because their vote would help the voters for change as they help meet the participation quorum requirement. An example is the Ukraine referendum in which those in favour of the EU-Ukraine Association Agreement did not know whether it was better to stay at home or vote. In the end, the participation quorum was met and the abstention of *status quo* voters had contributed to a higher percentage of voters against the agreement. While an approval quorum does not lead to this type of strategic voter abstention, it can be shown that it also affects voter participation

³⁵ The formalisation of this is also known as May's Theorem.

in the referendum. An approval quorum leads to passive voter abstention as *status quo* voters might choose to abstain from voting because their vote is no longer pivotal.³⁶

Secondly, the requirement of a 75% approval quorum will likely be politically unfeasible in any European country. A 30% approval quorum has already been called a 'Russian requirement' by parliamentarians in the Netherlands, because it demands a high majority for change (see Parliamentary Papers 1999/2000, p.12). The reason is that participation in referendums is usually not higher than 50%, which means that 60% of the voters must have voted for change with a 30% approval quorum and that a 75% approval quorum can never be met.³⁷

Lastly, the requirement of cohesiveness in parliamentary elections for preventing the Ostrogorski paradox is unrealistic. It cannot be imposed on voters that they only cast a vote for a certain political party if they agree with a minimal number (75% or 83%) of the issues. Moreover, a 100% approval quorum for a referendum when there is a cohesiveness of 75% would make winning a referendum practically impossible and, therefore, cause too much resistance among proponents of referendums. To conclude, an approval quorum of 3/4 in referendums would prevent the Anscombe paradox from occurring and in combination with a requirement on the cohesiveness in parliamentary voting it would prevent the Ostrogorski paradox from occurring. These solutions are, however, either practically unfeasible or not preferable given other negative consequences.

3.4. Avoiding connections

Since a quorum requirement cannot offer a politically feasible solution to prevent the Ostrogorski and Anscombe paradoxes from arising, we will discuss in this subsection another condition that provides a potential solution to the two paradoxes. This condition will be called 'avoiding connections' and we will suggest referendum issues that could satisfy this condition.

Since the Ostrogorski and Anscombe paradoxes occur because the connection of the separate issues to a full policy programme or the connection of the outcome to belonging to the majority party is lost, this teaches us that issue-wise voting is only appropriate if these connections do not matter. Only if issues are separate from each other and are not related to party politics does the issue-by-issue alternative provide a good alternative. If relations over the issues are of value, referendums should not be introduced into politics. This mistake was made in the Brexit referendum and the Ukraine referendum where the government's position and the possibility of executing its policies hung on the referendum outcome. David Cameron had to end his career as Prime Minister because of the referendum outcome and the Dutch government was stuck with a referendum result that directly contradicted its policies, not to mention the fact that it flew in the face of the government's intentions expressed in the international community.

We will suggest some referendum issues that could satisfy this condition of avoiding connections.³⁸

³⁶ See Bloks (2018, pp. 87ff.) and Aguiar-Conraria and Magalhães (2010a, p. 544; 2010b, p. 69) for more information about the consequences of participation and approval quora.

³⁷ Recall that an approval quorum presupposes a participation quorum, for if the majority must consist of 75% of the electorate, then *at least* 75% of the electorate must participate in the referendum (see Bloks 2018, p. 88, but also *Parliamentary Papers* 1999/00, p. 12).

³⁸ It should be noted that this only concerns issues which are not yet excluded by law. See Borman (2017, p. 173) for issues that can be excluded by law and the reasons for their exclusion in the Netherlands.

An important indication could be whether the issue is included in the governmental coalition agreement. If the issue forms part of the coalition agreement, it was probably dominant in the election campaigns and forms the basis of the government's authority gained in the parliamentary elections. Hence, such issues are connected to party politics.

Not necessarily all issues of the coalition agreement have to be excluded from referendums, since it is also possible that the governmental coalition states in the agreement which issues are suitable for a referendum and which issues are not. Thereby, it can exclude in advance the issues which are too closely connected to the authority they derive from the parliamentary elections and they can allow referendums on some less threatening issues.

The governmental coalition agreement is especially a good indication when the government forms a majority coalition. If the government forms a minority coalition, it faces legitimacy problems and the agreement might not have enough authority to exclude referendums on issues in the agreement.

The consequence of excluding the issues of the governmental coalition agreement from referendums is that citizens can no longer initiate a referendum on issues which were a hot topic during the parliamentary elections, for they have already had an opportunity to express their opinion on these topics. Indeed, the corrective referendum is ruled out on these issues.

When the issues in the coalition agreement are excluded, there might still be other issues that are suitable for a referendum. An example is a new important issue that arises in a crisis situation after the parliamentary elections. Suppose the euro falls and the government suddenly has to decide whether or not it should start a new monetary union with a select club of European countries. It might be wise for the government to consult the citizens in a referendum, or citizens might initiate a referendum on this topic.

Another example could be smaller issues that are considered important but are not a hot topic, such as whether we want to have elected mayors. These are usually not part of the coalition agreement or the government could state the acceptability of referendums on these issues in its agreement. With respect to such issues, however, the question could be raised whether they are relevant enough to be subjected to a referendum or whether enough attention has been devoted to the topic for citizens to be able to form an informed opinion.

The last example includes issues on which parliament decides to consult the citizens. If a majority coalition is formed on several issues, but no consensus has been reached on one specific issue, a referendum on this issue might be a good solution. The specific issue is then detached from the majority coalition and the party programmes, even though it might have been an important topic in the parliamentary elections. An example of a referendum held to resolve internal divisions within the governing party or coalition of parties is the United Kingdom European Communities referendum in 1975. 'When the British Labour Party came to power in 1974 shortly after British accession to the Community, it was split on the issue of membership of the European Economic Community and decided to call a referendum in 1975 to resolve the debate within the party' (Hobolt 2006, p. 157).

To conclude, if connections are to be avoided, the issues which are suitable for a referendum are severely limited and it is in the hands of the government after the parliamentary elections which issues are allowed in referendums. This restricts the corrective power of citizens in referendums, but it is the price that we, as citizens, have to pay for the advantages of our representative system.

4. Concluding Remarks

In the current debate about the supplementary value of referendums, believers and non-believers of referendums are at cross purposes; they weigh the pros and cons of referendums differently and emphasise different consequences of combining referendums with parliamentary elections. This paper aims to bring the opposite sides of the debate together by focussing on the structural features of referendums and parliamentary elections. As the systemic contrarities between referendum voting and parliamentary elections and the consequences of these differences are laid bare, it becomes clear that there is truth in the arguments on both sides of the debate. Specifically, a closer look at the contingent features of the referendum system and the system of parliamentary elections elucidates that referendums neither always enhance the power of citizens over decision-making nor always threaten the power and prestige of representatives. Hence, the arguments on both sides of the debate should be nuanced, with common ground being found in a discussion whether, and if so, when the structural features of each voting system are desirable.

In response to these conclusions, it might be objected that the paradoxes make too stark assumptions about the way representatives act and, therefore, cannot accurately reflect the real implications for the power of citizens and representatives over decision-making. This objection relates to the “mandate-independence controversy” of representation, so illuminatingly coined by Pitkin (1967). Our interpretation of the mathematical paradoxes seems to assume that representatives are bound by mandates and (have to) do exactly what their constituents want. But this is only one pillar of the concept of representation. The concept of representation also includes an idea of independence, where representatives should or must be free to act as seems best to them in pursuit of their constituents’ welfare. When representatives follow their own judgement and not necessarily their constituents’ vote, the demands of the voters might not be fully translated into parliamentary decisions, the policy programmes might in reality be more in line with the referendum results than the paradoxes portray and, more importantly, referendums might provide the only unmediated power of citizens over decision-making.

However, independent of empirical assumptions about the way representatives act, a fundamental result follows from the paradoxes concerning an incoherence of the citizens’ will on policy programmes. The mathematical paradoxes show that, contrary to what many people believe, the direct and unmediated vote in referendums does not necessarily provide a more accurate expression of the citizens’ will than does the outcome of parliamentary elections. Referendums only provide a different expression that may result in a different – even contradicting – majority outcome.³⁹ In fact, this different and direct expression of the citizens’ will may lead to a majority outcome that nobody really likes when several referendums are held on connected issues. Hence, the claim that the referendum vote, although unmediated, does not necessarily give more but a different power to citizens follows from the mathematical paradoxes independently of a background theory of representation.

³⁹ As noted in footnote 9, we assume that the citizens’ vote is based on voters’ attitudes towards the specific referendum topic and is not a ‘second-order’ election vote that is a means of signalling satisfaction or dissatisfaction with the government. If the latter were the case, the referendum vote would not constitute a different power, but a second way of casting a parliamentary vote.

This insight has normative implications: when taking parliamentary elections as the *status quo*, the systemic differences between parliamentary elections and referendums provide a strong argument for being cautious about supplementing parliamentary elections with referendums. The paradoxical situations to which the combination of the two different voting methods can give rise, blur the expression of the citizens' will. Therefore, it is questionable whether citizens should be given the opportunity to cast a direct vote in a representative system.

Although the systemic contrarities highlight that supplementing parliamentary elections with referendums may lead to problems, it cannot be concluded that referendums can never and should never be introduced in a representative system. Several conditions have been outlined in this paper that make it possible to overcome the conflicts between the two voting systems:

- (1) In order to prevent Nurmi's representation paradox from arising, referendums should either have a legally binding nature or be used sequentially in case of referendums on bills that have been approved of in parliament, giving them a materially binding nature. The former requirement could be politically unfeasible in countries whose constitutions do not allow for legally binding referendums. The latter requirement is more likely to be politically feasible but cannot avoid the norm conflict of Nurmi's representation paradox from arising when a referendum is held on a policy proposal that is rejected by a majority in parliament.
- (2) The referendum issue should not be connected to the policy programme elected in parliamentary voting. An indication could be whether the issue is included in the governmental coalition agreement, as these issues constitute the main themes in the parliamentary elections from which the government derives its authority.
- (3) The referendum can have an approval quorum requirement of 75% to deal with the Anscombe paradox, but this is not necessary if condition (2) is met. Also, given practical limitations and the negative side-effects of quorum requirements, a referendum with an approval quorum is not preferable to a referendum based on simple majority rule.

As these conditions severely restrict the application scope of referendums in the representative system, this might give rise to the criticism that such a restrictive application of referendums will not be enough to respond to the current challenges to political legitimacy in European countries. Be that as it may, the focus on structural features suggests that improving the representative system from within or creating new forms of democracy that combine different features in one system⁴⁰ is more likely to enhance political legitimacy than does fogging the political debate by combining the uncombinables.

⁴⁰ An example of a new form of democracy that combines different features of direct and indirect democracy in one system is *delegative* or *liquid democracy*. This is a form of democracy where voters can vest their voting power in delegates instead of voting directly themselves. See, e.g., the *Liquid Democracy Journal*, published by Interaktive Demokratie e. V., Berlin, Germany. Also, see Brill (2018) for a computational social choice introduction into liquid democracy, and see Blum and Zuber (2016) for a philosophical paper on liquid democracy.

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* I am grateful to Prof. Remco Nehmelman (Utrecht University) for the stimulating discussions and helpful suggestions, which have been very valuable in developing the argument of the paper. Also, I owe special thanks to Prof. Richard Bradley (LSE) and the anonymous referees of this journal for their careful reading and helpful suggestions to improve the paper.

Referendums in Representative Democracy Learning from Social Choice Theory

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Abstract

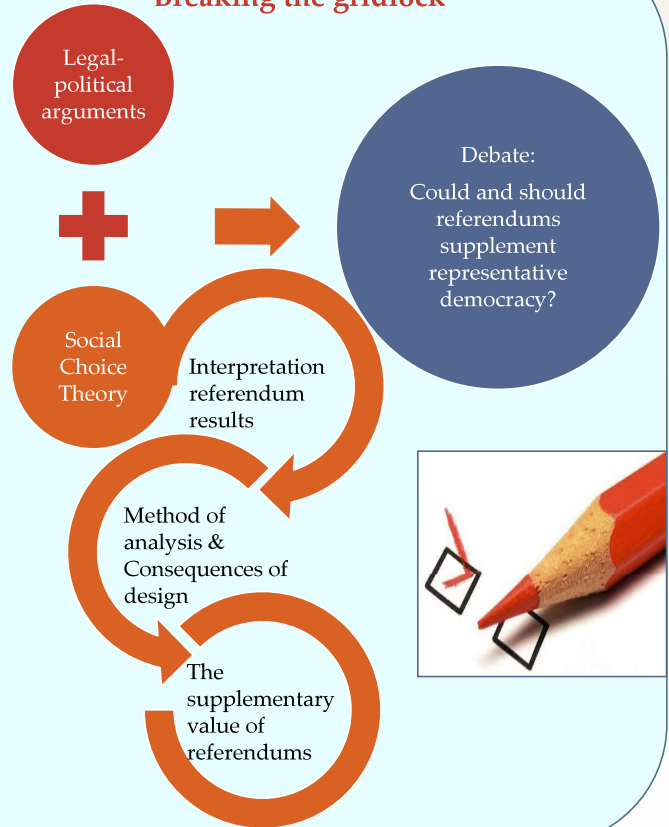
The **current legal-political debate** focusses on arguments for and against referendums and the normative question of whether representative democracy *should* be supplemented with this direct democratic instrument. However, there seems to be no answer on the question of how the arguments should be balanced. As Wim Voermans, Professor of Constitutional Law, says: preference plays a major role and referendums become an 'article of faith'. The current debate seems to have reached a dead end.

This research aims to **break the gridlock** in which the legal debate finds itself by using insights from social choice theory. It asks the question: *What can the legal-political debate about the supplementary value of referendums in representative democracy learn from social choice theory?*

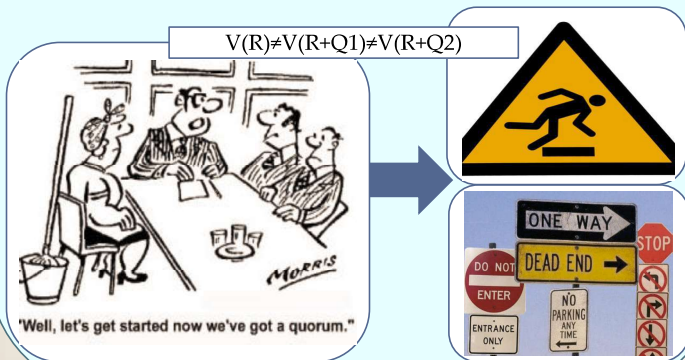
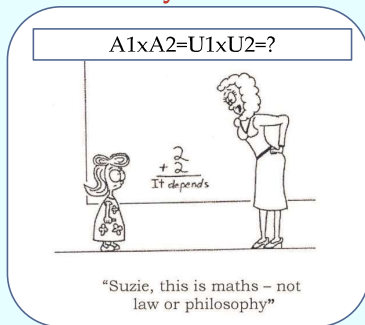
Social choice theory provides insights about **the interpretation of referendum results**. This research translates these insights to the debate about the value of referendums in representative democracy. Thereby, it **deepens the arguments in the legal-political debate**.

- Firstly, it is explained that referendums provide a **method of analysing** the majority vote that is different from the method used in parliamentary voting. This causes difficulties in reconciling referendums with representative democracy.
- Secondly, the **consequences of different referendum designs** are analysed. This adds a new layer to the legal-political debate. The debate revolves around a general idea of referendums, while this research shows that the supplementary value of referendums is dependent on the design.

Breaking the gridlock



Preliminary Conclusions



Outline

Part 1: In General

- The current legal-political debate
 - Overlooking the Design
- Social choice theory insights
 - Different Method of Analysis

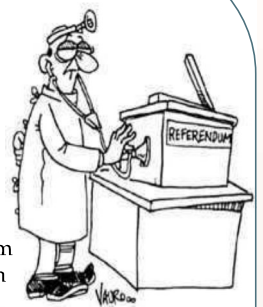
Part 2: The Ukraine Referendum

- The legal context of the Ukraine referendum
 - The referendum type and design
 - The Dutch legal context
 - The International legal context
- Social choice theory insights
 - The Quorum Requirement
 - The Quorum & Non-Binding Nature

Part 3: The Brexit Referendum

- The legal context of the Brexit referendum
 - The referendum type and design
 - The British legal context
 - The International legal context
- Social choice theory insights
 - The Number of Alternatives
 - The Stages in the Procedure

Part 4: Conclusions



Methodology Appendix

Because of the unusual character of this dissertation in terms of research output and research methodology, I will use this methodology appendix to explain the research process and reflect on the research methodology.

Research Process: Duration, Supervision and Peer Reviews

This dissertation was written for the LLM degree in Legal Research at Utrecht University. To understand the research process of this dissertation, it should be noted that I followed a slightly different path towards completion of the Legal Research Master (LRM) than most students. I graduated from the two-year LRM in 1.5 years: I was student from September 2016 until August 2017 and from September 2018 until March 2019. From September 2017 until August 2018, I put the LRM on hold in order to complete a one-year MSc degree in Applicable Mathematics at the London School of Economics and Political Science (LSE).

I started the research for this dissertation in the fourth period of the 2016-2017 academic year. The interviews that I had conducted with Beryl Dreijer (the first woman on the 2017 party-list of *Geen Peil*), Wim Voermans (Professor of Constitutional at Leiden University) and Koen van der Krieken (PhD Researcher about local referendums at Tilburg University) for the LRM course on quantitative and qualitative research methodology in the previous period (the third period) had given me research ideas that I wanted to explore further. Under the supervision of Professor Remco Nehmelman, I wrote my research ideas down in a research proposal that I pitched at the 2017 *Dare to Cross Over!* conference and laid the foundations of the paper on referendums and parliamentary elections (the first paper in this dissertation). Besides taking the opportunity to discuss my research ideas at the *Dare to Cross Over!* conference, I also reached out to mr. dr. Coen Modderman (teacher and researcher at Utrecht University) and Merlin Majoor (teacher at Utrecht University), to whom I am very thankful for their support.

During the 2017-2018 academic year, I put the research under the supervision of Remco Nehmelman on hold in order to follow the Master's degree in Applicable Mathematics at LSE. However, while I was in London, the Third Rutte cabinet was formed and started a heated debate about the Dutch Consultative referendum law. As I had formed ideas about the lack of attention for the design of referendums in general and for the quorum requirement in the Dutch Consultative referendum law in particular, I felt the urge to engage in this heated debate. In my spare time, I analysed the debates in the House of Representatives concerning the quorum requirement in the Consultative referendum law, which confirmed my ideas. Then, the paper on the Dutch Consultative referendum law (the second paper in this dissertation) surprisingly wrote itself and was with minor modifications accepted for publication in the *Nederlands Juristenblad* in December 2017.

In August 2018, I started improving and perfecting the paper on referendums and parliamentary elections that I had drafted under the supervision of Professor Remco Nehmelman. The modifications, that I have since then made, are based on the review comments of the *European Constitutional Law Review*, discussions with Professor Richard Bradley (LSE)¹ and the commentary of the reviewers of *Moral Philosophy and Politics*.

On 8th November 2018, I submitted this dissertation, which was graded a 9.0 by Professor Remco Nehmelman and Professor Janneke Gerards. As I did not yet know in November that the *European Constitutional Law Review* was going to reject the paper on referendums and parliamentary elections and that *Moral Philosophy and Politics* was going to accept the revised version of the paper, the dissertation contained an older version of this methodology appendix with reflections on the comments of the reviewers and the so-called darlings that I had killed in order to make the papers fit

¹ Professor Christian List and Professor Kai Spiekermann at LSE were also interested in discussing the article, but due to summer holidays and work for dissertations, they did not have time at short notice.

the word limits of the academic journals. In case there is interest in these reflections, I am happy to provide them.

Research Methodology: Law and Social Choice Theory

The two papers in this dissertation integrate mathematical methods into constitutional legal research about referendums. As I have mainly used social choice theory, which is a sub-field of mathematics and economics, the question may arise whether the research methodology can be characterised as *the economics of law*. In this section, I will argue that the research methodology does not fit into the economics of law but is rather a novel integration of social choice theory into a legal debate. In order to do so, I will describe the main questions and methods of the discipline of social choice theory and will compare these questions and methods to the questions and methods of the discipline of the economics of law.

Social choice theory is a subfield of political science, economics and mathematics. In a broad sense, it examines ‘the behavior of governments and the actors in them.’² It is closely related to research labelled as *public choice* or *political economy*, which are, according to D.C. Mueller, two labels for the same type of research.

More specifically, social choice theory studies collective decision-making processes and procedures.³ The actors studied by social choice theory are voters. Because of the focus on voting systems to reach collective decisions, the discipline is also sometimes called *voting theory*.

The study of collective decision-making processes raises many questions. According to Amartya Sen, the 1998 Alfred Nobel Memorial Prize winner for his work in social choice theory, it is ‘a broad discipline, covering a variety of distinct questions.’⁴ If there is a central question that motivates and inspires social choice theory, then this question is according to Amartya Sen: ‘how can it be possible to arrive at cogent aggregative judgements about the society (for example, about “social welfare”, or “the public interest”, or “aggregate poverty”), given the diversity of preferences, concerns, and predicaments of the different individuals *within* the society?’⁵ Thus, social choice theory starts ‘from the articulated opinions or values of the members of a given community or the citizens of a given society and attempts to derive a collective verdict or statement.’⁶ It examines how this collective decision can be reached; how individual opinions can be aggregated in order to form a collective decision.

This problem of aggregating individual preferences leads to positive and normative questions such as: ‘How can a group of individuals choose a winning outcome (e.g., policy, electoral candidate) from a given set of options? What are the properties of different voting systems? When is a voting system democratic? How can a collective (e.g., electorate, legislature, collegial court, expert panel, or committee) arrive at coherent collective preferences or judgments on some issues, on the basis of its members’ individual preferences or judgments? How can we rank different social alternatives in an order of social welfare?’⁷

Social choice theorists study their questions using formal or mathematical techniques that are part of the methodology of economics (such as game theory). They develop general models and prove theorems.⁸

² D.C. Mueller, ‘Public choice, social choice, and political economy,’ 163(3-4) *Public Choice* (2015) p.379 at p. 379.

³ C. List, ‘Social Choice Theory,’ *Stanford Encyclopedia of Philosophy* (2013), <<https://plato.stanford.edu/entries/social-choice>>, Accessed 19 April 2017.

⁴ A. Sen, ‘The possibility of social choice,’ 89(3) *The American Economic Review*, (1999), p.349 at p.350.

⁵ A. Sen, *supra* n.4, p.349.

⁶ W. Gaertner, *A primer in social choice theory: Revised edition*. (OUP 2009), p.1.

⁷ C. List, *supra* n. 3.

⁸ C. List, *supra* n. 3.

The emphasis on a mathematical approach distinguishes social choice theory from the related discipline of public choice theory. D.C. Mueller observed in a comparison of articles published in the main social choice and public choice journals, respectively *Social Choice and Welfare* and *Public Choice*, that the social choice articles were more often mathematical or theoretical than the public choice articles. The latter were found to be more often empirical, which means that they might have used mathematics in deriving models to be tested but had as their main purpose the testing of hypotheses.⁹

Some might be suspicious of applying mathematical models to “real-world problems” given their complexity. Sen argues that the suspicious are ultimately misplaced as theories of social choice show that formal techniques are needed to understand the complex problems, which arise in collective decision-making. The formal methods prevent from being seriously misled by the paradoxes and complex problems occurring in public decision-making and, therefore, informal insights cannot replace the formal investigations.¹⁰

However, it is also impossible to imagine social choice theory without informal insights. The informal insights inspire social choice questions and, therefore, it is ‘centrally important to relate formal analysis to informal and transparent examination.’¹¹ According to Sen, developments in social choice theory illustrate the deep complementarity between formal reasoning about postulated axioms (including their compatibility and coherence) and informal understanding of values and norms (including their relevance and plausibility).¹²

The discipline of *the economic analysis of law* - also called *law-and-economics* or *the economics of law* - analyses law and legal institutions with an economic perspective. It examines ‘the formation, structure, processes and impact of the law and legal institutions.’¹³

While the economics of law focusses on legal questions, social choice research is determined by questions on collective decision-making. Collective decision-making processes can be regulated through legal institutions, such as referendums, but the legal element of collective decision-making does not motivate social choice research. In fact, collective decision-making is a process belonging to the political realm, as it concerns voting systems used to legitimize political power, and it is more often political science questions than (purely) legal questions that inspire social choice research. By contrast, scholars in the economics of law are impelled by legal questions. These could also be purely legal questions, such as various parties’ litigation strategies or the functioning of, e.g., tort law or property law.¹⁴

Just like social choice theory, the discipline of the economics of law combines formal methods with informal insights. The formal or mathematical methods used in the economics of law originate in economic theory, mostly price theory, and statistics.¹⁵ These are similar to those used in social choice theory; game theory is extensively used and models are developed. However, while social choice theory has a strong theoretical focus, the economics of law has also developed extensive empirical analysis to quantify the impact of the law.¹⁶

⁹ D. C. Mueller, *supra* n.2, p.383.

¹⁰ A. Sen, *supra* n.4, p.353.

¹¹ A. Sen, *supra* n.4, p.353.

¹² A. Sen, *supra* n.4, p.366.

¹³ L. Kornhauser, ‘The Economic Analysis of Law,’ *Stanford Encyclopedia of Philosophy* (2011), < <https://plato.stanford.edu/entries/legal-econanalysis>>, Accessed 19 April 2017.

¹⁴ P.H. Rubin, ‘Law and Economics,’ *The Concise Encyclopedia of Economics*. (2008). Library of Economics and Liberty, Accessed 19 April 2017.

¹⁵ C. Veljanovski, *The economics of law* (The Institute of Economic Affairs 2006), p.14.

¹⁶ C. Veljanovski, *supra* n.15, p.57.

The economics of law shares with social choice theory, just like other branches of economics, ‘the assumption that individuals are rational and respond to incentives.’¹⁷ This assumption underlies the mathematical models developed in both disciplines. The focus on incentives and people's responses to these incentives forms a main difference with the legal approach.¹⁸

A more problematic difference between the economic and legal approach is the economic focus on costs and benefits. Economists place the costs and benefits of legal rules at the forefront, while lawyers are mostly not concerned with the costs.¹⁹ Because of the cost-benefit focus of economists, the economics of law is based on a normative assumption about the functioning of law: legal rules should be cost efficient. Unsurprisingly, one role of the economics of law is ‘to explore whether laws promote economically efficient outcomes and, if they do not, to suggest how they can be changed to do so, always provided the cost of the change falls short of the benefits.’²⁰

By contrast, social choice theory does not know this normative assumption about law, but the discipline does underlie an idea of efficiency about collective decision-making processes. Probably the assumptions underlying social choice theory are less controversial for legal scholars than those that the economics of law makes, but they are definitely also normative. Social choice theory does not only examine *how* collective decision-making processes function, but also forms theories about the normative properties of these processes. An example of a famous normative contribution to social choice theory is the Arrow paradox. This paradox demonstrates that ‘no process for aggregating individual preferences - be it the market or the ballot box - can produce a social ordering that satisfies five, seemingly reasonable conditions.’²¹ It launched a huge amount of research into the normative properties of preference aggregation procedures.

To conclude, the methods of social choice theory and the economics of law are similar in that they combine formal analysis with informal insights. The informal examinations in the disciplines are mostly used to relate the formal investigations to the “real-world” questions that inspired the research. While the economics of law is specifically focussed on legal questions, social choice theory is inspired by questions about collective decision-making processes.

This research concerns the design of referendums. Since referendums are both legal institutions and processes or procedures of collective decision-making, the topic could inspire both social choice theory and the economics of law. Neither the topic nor the methods distinguish the approach in this research as either law and social choice theory or as the economics of law. However, the assumptions underlying the economics of law do not correspond to assumptions made in this research. This research does not look at the cost efficiency of the legal institution of referendums and also does not intend to assume the importance of that. Therefore, it does not belong to the area of the economics of law. As this research does not only relate mathematical analysis to real-world examples (like classic social choice theory) but also introduces legal reasoning into the discussion and examines legal implications, this research is to be labelled as *law & social choice theory*.

Concluding Remarks

With two academic publications, taking up the unconventional challenge of integrating mathematics in the legal-political debate about referendums seems to have borne fruit. And these two papers are just the start of a research agenda on the intersections between mathematics and law, as I see further possibilities of bringing the two worlds of law and mathematics together in the debate about referendums, such as about agenda-setting in referendums (related to the optimal number of alternatives to be chosen in the referendum) and the effects of sequential referendums, as well as in other legal-political debates about, inter alia, parliamentary elections, electoral districting and the

¹⁷ P.H. Rubin, *supra* n.14.

¹⁸ P.H. Rubin, *supra* n.14.

¹⁹ C. Veljanovski, *supra* n.15 , p.15.

²⁰ C. Veljanovski, *supra* n.15 , p.11.

²¹ D. C. Mueller, *supra* n.2, p.380.

institutional balance in the EU. In my future career after this dissertation and after the Legal Research Master, I want to take on this challenge of bringing the worlds of law and mathematics together.