THE JURGA SYSTEM

A Democracy Based on Sortition

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Introduction

Democracy is not natural. Democracy requires that the sole basis of government must be the equal right and duty of all citizens to participate in governing decisions. This condition takes considerable effort to maintain, and in practice that effort must be made by the very government whose power should depend on popular support.

Hierarchy, by contrast, is very natural. Most social animals display some form of hierarchy, and even without formal political systems the governance of groups of animals depend overwhelmingly on the decisions of a few senior members. Democratic theorists ignore this fact at their peril: it can be dangerous to flatten governing structures for purely ideological reasons.

Nevertheless, we should not shy away from attempting to make government more responsive to the popular will, consistent with accomplishing the tasks we expect government to perform. It should even be possible to improve upon current versions of democracy on purely performance grounds. Properly framed, the twin goals of improving the epistemic quality of political decisions and increasing direct participation in politics by ordinary citizens should be mutually reinforcing.

In this book, I intend to propose a system in which the number of touch points between the people and the state is dramatically increased, and in which the people are the ultimate authority on every major policy. Citizens will exercise this authority through the *jurga*, a type of citizens' assembly based upon compulsory service (like jury duty) and private deliberation.

In contemplating whether or not the people are really ca-

pable of self government, we should take a minute to think about what "the people" is as a concept. There is a laziness in the use of the term, as if "the people" have an intrinsic will, apart from the mechanisms by which that will is measured. My view, by contrast, is that "the people" does not exist until it is measured. Populism, therefore, is a phenomenon not of the collection of citizens, but rather of specific mechanisms that aggregate popular opinion into political structures.

And how are these aggregation schemes faring today? Poorly, to say the least. I won't recite the litany of apocalyptic criticisms that come under the heading, "crisis of democracy", but suffice it to say that enlightenment era democracy does not appear up to the challenges of the information age. And what are the structures of democracy from the enlightenment era anyway? Enlightenment thinkers created the modern election, and established a floor for individual rights, starting with religious freedom. But what of the structure of government itself? They left that largely unchanged.

The fact is that modern politics is still just a contest among a small number of political factions. Admirers of the U.S. Constitution point to the "Revolution of 1800", in which power was transferred peacefully from one faction (the Federalists of John Adams) to an opposing faction (the Democratic-Republicans of Thomas Jefferson). This was undoubtedly a tremendous accomplishment given the civil and dynastic wars that had previously been the norm.

Unfortunately, peaceful transfer of power is not enough to meet the needs of modern society. When we look critically at our political structures, we do not see a finely tuned system for translating popular opinion into policy, but rather a weird hybrid: a set of medieval and early modern governing structures with elections and some basic rights bolted on. Every age likes to see itself as an end, but we should view the current iteration of democracy as a transition from medieval governance that treated ordinary people like objects to a new, as yet unknown system, in which popular participation is the engine of government, rather than just an arbiter among elite factions.

This, too, is the lens through which populism must be seen. Concerns about whether or not "the people" can make good

choices rest on the assumption that elections are expressions of policy preference. Political elites often see them that way, but most voters experience them as contests for contests' sake. Voters get one day every few years to bundle all of their hopes and concerns about society into a choice that amounts to taking a side among a few parties. In this context, referenda are no better than ordinary elections, as the topic of a referendum ends up polarizing society on factional lines just like any other election.

On the other hand, when we look dispassionately at whether ordinary people can deliberate effectively on matters of policy, the evidence is overwhelmingly positive. This book is not intended as a survey of these results, but there is extensive literature on the wisdom of crowds, and concrete projects like the Deliberative Polling Project (DPP) have demonstrated conclusively that ordinary citizens can, under the right conditions, make good decisions on complex policy matters.

There is a large gap between the quality of outcomes that we experience today, and the quality of deliberation that ordinary citizens demonstrate under good conditions. The challenge of structural reform is to bridge this gap. We should not be deluded by quick answers and facile analysis, however. I return to my original premise: democracy is unnatural. Creating and maintaining a democracy will require rigid enforcement of its bedrock principles. It would be easy call some people up at random, ask them if they wish to participate, then throw those who say 'yes' into a room and tell them to come up with some policies. None of this would be democratic: the selection process is highly biased, as it only takes volunteers, and the manner in which this group is supposed to deliberate is totally undefined. Just coming up with an agenda would require the kind of psychosocial manipulation that undermines the democratic legitimacy we seek.

Instead, we must be prepared to impose real requirements on citizens. We should compensate citizens for their service, but that compensation does not render the service optional, just as paying a conscripted soldier does not allow him to abandon his post. After all is said and done, I don't think that the service required of ordinary citizens will appear very onerous,

but too many entries in the sortition library refuse to contemplate any mandatory service at all. Nations are not tree houses run by local schoolchildren. The modern state is a highly complex edifice must be monitored constantly, and from many different angles. Requiring meaningful participation from each citizen is a reform that is long overdue.

In addition, we must be prepared to create positive structures for deliberation, and real limits on the scope of the policies it can produce at any one time. Ordinary citizens can make good decisions, but they are not perfect, and incrementalism allows the system to make the inevitable policy mistakes without sending the whole ship to the bottom. This rule applies to elites as well, but for some reason it is "the people" who are blamed when high stakes, winner-take-all contests produce undesirable results. Perhaps important political decisions shouldn't be bundled into high stakes wagers in the first place. For example, sortition has been proposed as a way out of the U.K.'s current morass over Brexit, but it is clearly too late for that. Brexit was structured all wrong from the very beginning; asking a panel of ordinary citizens to solve this mess seems more like scapegoating than reform. Even an ideally constituted body of ordinary citizens would likely fail to resolve such a question.

What questions should ordinary people resolve, then? While projects like the DPP have shown the capacity of citizen panels to deliberate effectively, they have done so within structures that formulate questions for consideration in advance. This is easy for an academic body convening a panel with no actual authority. It is considerably more challenging in a political system in which every procedural step is an opportunity to skew the results in favor of one interest group or another.

A primary aim of this book to introduce political structures that can serve up public policy choices to citizen panels in a digestible form. Before getting to this task, however, I will take a moment to critique the most common solution to this problem: the all-comers model.

Under the all-comers model, anyone can make any proposal they wish, and all proposals receive some form of consideration by the body politic. A good example of this model

is the citizen initiative process in California, in which anyone can submit a proposal for consideration in a general election. Unfortunately, the citizen initiative process does not achieve the goals that we have here: to bring ordinary citizens into the process, and to enact policy that is more broadly reflective of the popular will.

Most obviously, it is simply impractical to place every single proposal on a general ballot. California deals with this by having a signature gathering requirement. But gathering signatures is time consuming, and that time comes at the expense of either volunteers or paid staff. Special interests with a lot of money therefore have a distinct advantage, and in fact well-heeled special interests do have a history of getting what they want from the initiative process. But even when an initiative represents the collective efforts of dedicated volunteers, democratic principle loses. Activists working on a cause they believe in have a better story to tell than corporate stooges, but they still represent the narrow vision of a self-selected slice of the population.

This dynamic is native to the all-comers model, and cannot be reformed away. Its proponents conflate the *right* to have an equal say in making proposals with the *motivation* and *resources* to actively participate in making them. A democratic system must bring both the act of generating new policy ideas and of enacting policy under a democratic umbrella. "Let anyone propose" sounds democratic to people casually discussing political reform over coffee. In fact, it leaves the field unregulated, which means that special interests—economic and ideological—have grossly disproportionate power.

Instead, we must devise ways to propose policy in a way that vindicates the rights of all citizens, not just billionaires and ideologues. This applies to policy in any form, including advancing candidates for office. Again the idea, "Let any person stand for office" has a superficial appeal, but it makes the right to propose dependent on an actual desire to serve. The results of any such selection process will be skewed, even if a citizen panel is interposed as a filter.

The all-comers model continues to exert an appeal because it has a nice story to tell. Democracy is natural, but it is being obscured by evil elites. Just pry away the grip of the oppres-

sors, and the people will spontaneously build a democracy that blooms like a flower that can finally see the sun through the weeds. It is a compelling story, but it is false. Democracy is not natural.

To create a real democracy, we must be prepared see "the people" as a merely half formed concept. It is our job to shape it further, by building structures that bring out the best in regular citizens. No one knows what the right policy is at any given time and on any given issue. But we have considerable knowledge about *how* to make decisions well. Let us harness that knowledge to craft "the people" into a truly democratic decision engine, endowed with both unquestionable legitimacy and real deliberative capacity.

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Chapter 1

Goals of Political Reform

1.1 Representation

Definition 1.1.1. *Representative* : A *representative* is an agent that acts on behalf of one or more entities that cannot exercise agency directly.

This most basic definition of representation covers a wide range of possible cases, and boils down to a simple formula: one acts on behalf of another. Since our topic is political reform, the primary goal is to create a structures that allow government to represent the polity of a nation. We are not concerned with other uses of the word, such as artistic representation. We shall see, however, that political representation has quite a bit to do with statistical representation, aka random sampling.

There are a great many opinions on the nature of representation. Does a representative act in the best interest of the represented? As the represented would want? Does the representative mandate come from the represented, as in an election? Or from another agent, as in a court appointed guardian to a small child? All of these questions are of real interest to the political philosopher.

Nevertheless, in constructing a working constitution, any

constraints on the representative mandate must be structural rather than epistemic. Officers in the public service do take oaths that attempt to bind the officer to a particular mindset. But such oaths are mostly a formality. It is nearly impossible to apply any direct constraint on someone's cognitive disposition; enforcement would require an explicit statement from the officer of intent to violate the oath.

We therefore consider the nature of a representative mandate and the structures that constrain a representative as an agent to be one and the same. What is the nature of the representative mandate given to a member of the House of Representatives in the United States? It is to have a term of two years as a member of a body empowered to pass legislation (together with the Senate). We can add more to this definition by including the rules of procedure within the House, and any other constraints routinely placed on members. But we are not concerned here with trying to alter the cognitive disposition of representatives by any means other than changing the constraints that they face. That is the task of substantive political discourse; our topic here is structural politics.

Representative Constraints

The most traditional constraint placed on government officers is simply the scope of authority associated with a given office. On the broadest scale, this is manifest in systems of "checks and balances", whereby one political entity limits the scope of agency available to another. Mechanisms such as judicial nullification, veto power, and the power to confirm or reject political appointees all come under this heading.

We wish to examine the extent to which such constraints exist at the discretion of political actors. Mechanisms like political appointment and confirmation are highly discretionary, on the side of appointment (usually by the chief executive) and on the side of confirmation (usually by a legislative body). Under the U.S. Constitution, for example, the President has complete freedom to choose anyone or no one for any office, and the Senate has complete freedom to confirm, reject or ignore the nominee. Throughout the book, I will make the case that discretionary constraints are almost universally bad, and

should only be used when no other option is available.

Representative Information

One constraint missing from most traditional representative bodies is on information. Officers in all branches of government are considered entitled to as much information as they can collect on a given topic. When information is restricted, it is not to make the cognitive disposition of the agent more representative, instead it reflects either concerns about the security of secret information or some petty rivalry within the government. Restricting information can be a powerful tool in achieving better representation.

Example 1.1.1. In U.S. courts, appeals are heard by three judges selected from a larger pool of judges in a given circuit. These judges consider arguments from both sides in the form of written legal briefs. Whether or not these briefs are written before or after the panel is chosen can make a considerable difference in the arguments made therein.

Forcing litigants to submit briefs before the selection of judges increases the representative quality of appeals. Using three judge panels is an administrative convenience; in principle, it would be preferable to have all the judges in a given circuit sit for every case. The representative mandate is to get the entire court's opinion. The briefs reflect this larger pool. The selected judges can draw their conclusions on the basis of arguments that are meant for the entire court, not arguments that are tailored specifically to them.

Example 1.1.2. Another example from the courts is the jury trial itself. Currently, the jury sits in the courtroom as the trial takes place. This presents corrupting information to all of the trial participants: they can see each juror's reactions to what is said, and tailor their case to those specific individuals. This is a violation of the representative mandate, under which the jury is supposed to be a proxy for the general public.

One solution is to keep the jurors in a separate room so their reactions cannot be seen. Even better would be to conduct the entire trial before selecting the jury, then replay it after the fact. In this model, jury selection would have to be

purely random, which is probably another improvement. The fact that lawyers have input into jury selection is an example of procedural discretion, which is worse than corrupting information.

While these may not be the most consequential applications in government, they illustrate the fact that, by taking pains to limit certain types of information, we can put participants in a context that better reflects their underlying representative mandate. With these ideas in mind, we divide information available to political actors in the following way:

Definition 1.1.2. *representative information* : Information that is appropriate for consideration by a representative in carrying out a particular mandate.

Definition 1.1.3. *corrupting information* : Anything that is not representative information.

Definition 1.1.4. *procedural discretion* : Any control given to representatives that allows them to modify the procedure by which public actions are taken, as opposed to the substance of those actions.

We already have examples of corrupting information, and of attempts to limit it. In most democracies, high ranking government officers must disclose their financial assets, and often must place those assets in a blind trust. This is meant to ensure that public decisions do not reflect the officer's desire for personal gain. But this is the extent of most ethical norms surrounding corrupting information.

It is hardly surprising that such a narrow understanding of this concept should emerge from the people who populate elite public offices. "Corrupt" in this framing refers only the most obvious, selfish way to betray a representative mandate. When we consider not merely personal corruption but any contamination of a representative mandate, we find an ocean of distorting information in modern democracy compared to which knowledge of one's own stock portfolio is but a drop.

Another red flag is the fact that politicians impose significant constraints on the information allowed to ordinary citizens serving on juries, but no such constraints on themselves. Courts rightly prevent juries from access prejudicial

information about defendants, and judges often declare mistrials when such information accidentally passes to jurors. Why should politicians be any different?

One of the primary goals of this book is to identify the major sources of corrupting information in this broad sense. By far the most import of these is the conflation of making proposals and making binding decisions. These two acts are fundamentally different. Those who propose should have as little information as possible about those who decide. The failure to separate these two things is a major factor in modern democracy's loss of legitimacy in the eyes of the public.

1.2 Political Agency

Politics is ultimately about taking purposeful action on behalf of society as a whole. There are a great many ways to interpret this mandate, but first and foremost, we must decide what we mean by *purposeful action*.

The most obvious example of political agency is a single citizen making the choice to vote. A single, unified agent—a person—takes a simple, atomic action. The voter has *inherent agency*, meaning that she is able to take action on her own, across the entire spectrum of possible actions. In this case, the list of options available on the ballot is finite. But with inherent agency, the set of possible actions can be infinite as well. For example, a voter can come up with an original proposal for fixing her city's potholes; the space of such proposals is infinite.

The only entities in society that have inherent agency are individuals and *corporate bodies*. In fact, our purposes, this is the *definition* of a corporate body:

Definition 1.2.1. *corporate body* : An entity, legal or otherwise, created to exercise inherent agency for any purpose, and governed by internal rules that enable it to act in a coherent and purposeful manner.

The actual decision makers behind corporate bodies are people, but importantly, the only *agent* is the corporate body. The agency of a member (usually but not necessarily an employee) of the corporate body is subordinate, at least in his of-

ficial duties. This is important: A corporate body in not just an assembly of people, but a separate thing, with its own will and capacity for action.

In keeping with the infamous Iron Law of Oligarchy, nearly all corporate bodies are governed by a small group of people. The Iron Law may be distasteful, its author repugnant. But its empirical validity has been confirmed time and again.

There is an important restriction, however. The Iron Law only applies if we wish to apply inherent agency. We can get around it if we only need a more limited form of agency. In constructing a government, we rarely want full, unbridled inherent agency. A key theme will therefore be to figure out exactly what kind of agency a specific government organ needs, and then provide only that and no more.

Do Democratic Entities Have Agency?

Democratic entities are the organs of government that are directly subject to the will of the electorate. In the U.S., this is restricted to the Presidency, the House of Representatives, and the Senate.

There is no question that the Presidency has inherent agency. For the legislative bodies, the picture is more complicated. In practice, they do, but only because the members of the legislature coalesce into parties, and most of the members of each party effectively delegate their representative mandate to a small leadership group. It is these leadership groups—the leadership groups of the majority and minority—that really run the chambers. Of course, the leadership of the majority always has the final say. This is as true in parliamentary systems as it is in presidential ones.

The Original Sin of Democracy

If we look at a legislative chamber from a purely structural point of view, we must conclude that it does not have agency. The pretense of these bodies is that a bunch of people thrown into a room and told to act can carry out their mandate in a democratic way. Members face an impossible choice: carry out their representative mandate independently but have no power, or retain some influence but surrender their

democratic mandate to undemocratic parties. We can scold politicians for this problem, but the real source is the structure of the chamber.

This is the original sin of democracy—to bring together a group of people who have at least some claim (perhaps tenuous) to being representative of the polity, but deprive them of any way to act without violating their representative mandate. A chamber constructed in this way can be democratic, or it can be an agent, but it cannot be both. This would seem to be a depressing conclusion, so we must look for a creative way to marry democracy to agency.

The Agency Gap

Ordinary legislative bodies become battlegrounds for unnaccountable political parties because they have an *agency gap*.

Definition 1.2.2. *agency gap* : A condition in which a body that has authority to act nevertheless does not have internal governance structures sufficient to carry out its mandate.

Definition 1.2.3. *political slack* : The sum total of the agency gaps in the system, or the general phenomenon of agency gaps.

Definition 1.2.4. *incomplete agency* : A body which is defined or constituted for the purpose of taking action, but which has an agency gap rendering it unable to consistently fulfill its mission, is said to have *incomplete agency*.

Any traditional representative chamber has a large agency gap. The best way to see this is to compare it to a corporate body. A corporate body has agency, and that agency almost always takes the form internally of a small group of leaders. How is this different from a representative chamber? In a corporate body, the leaders are subordinate to the whole, and can be removed from responsibility without contradiction. The leaders have no independent mandate, their only mandate comes in their service to the corporate body.

In a representative chamber, each member has an independent mandate. Such a chamber is supposed to be a single agent, and yet it is composed of parts that are themselves independent agents in their own right. This is, quite simply, a

contradiction, and not merely a conceptual one. The representative chamber is a fiction from the very outset. It either acts as a corporate body, subsuming each member's mandate into a larger whole, or it devolves into chaos. In practice, we see that political parties effectively turn a chamber into a corporate body, but they are highly unstable, as they can act only as long as 50%+1 of the chamber's members hold together.

This is, of course, just a reformulation of the original sin of democracy, but it bears repeating, since it is at the heart of so many of democracy's problems. It should be clear that a better political system must be slack-free.

Shadow Agents

When a government organ (or any other structure) is created with incomplete agency, some other entity, formal or informal, arises to supply the missing volition. We call such entities *shadow agents*:

Definition 1.2.5. *shadow agent* : An entity, usually taking the form of an informal corporate body run by a small number of leaders, which comes into being within another body that has been defined with incomplete agency.

It might seem, naively, that political parties are all shadow agents in a traditional legislative chamber. This is not true, however. Only the ruling coalition is a true shadow agent, having attained 50%+1 and hence full control. In practice, minority parties sometimes have some rights, and hence some ability to act, but on major issues only the majority can act.

Some governing systems do define parties in a formal way, and even go so far as to define the ruling coalition formally. Technically, this makes the majority coalition not a shadow agent, but we must follow the consequences of this decision. It means that, from the point of view of agency, the ruling coalition is the chamber. Effectively, any member of the chamber who is not part of the ruling coalition may as well resign. We have solved the agency problem at the cost of democracy.

Procedural Agency

While the Iron Law of Oligarchy constrains our ability to construct bodies with inherent agency, there are other ways to grant groups of people the ability to act. The simplest example is voting itself. Members of the electorate fill out a ballot, and those ballots are aggregated to produce a decision on a particular set of questions. I term this *procedural agency*:

Definition 1.2.6. *procedural agency* : A form of agency in which a group of people act according to procedures determined in advance, with any potential decisions or actions chosen from options determined in advance by some external agent. The procedures must be sufficient to guarantee a decisive result.

This form of agency comes with a significant limitation: it can only answer questions formulated in a way that can be easily aggregated. Broad questions like, "How would you create a better health care system?" are not suitable to this approach; narrow questions like, "Which is your favorite health care system from among these five options?" are. In addition, procedural agency is generally temporary, because the options for action must be determined in advance, and once a choice is made, there is nothing left to do.

Still, procedural agency gets around the Iron Law, allowing us to assemble arbitrary groups of people to make decisions, so long as the options are properly structured.

Structural Agency

Procedural agency is far too limited to build a full government with, so we must look for a way to knit together various bodies, endowed with different kinds of agency, into a comprehensive system that can meet the full scope of challenges that a government faces, and nothing more. This latter requirement—that agency be limited to only what is needed—is the real challenge.

Definition 1.2.7. *structural agency* : A form of agency in which a number of bodies with either procedural or inherent agency are organized into a whole, for the purpose of carrying out an ongoing mandate.

Our goal is to create an entire government with structural agency to fulfill its democratic mandate. This will be a polyglot entity, with organs of various types, including some with procedural agency and some with inherent agency. Clearly, bodies with inherent agency can become a threat to the system, as any such body has the internal capacity to act beyond its stated role. These bodies will have to be regulated externally, through a wide variety of systemic constraints.

The most important constraint that we place on all bodies with inherent agency is that they cannot make any binding policy decisions. Only a body with procedural agency is trustworthy enough for that. We will see exactly what this means in practice as we proceed, but this is an unalterable principle. Hopefully, the day will come when this premise is recognized as being as essential to democracy as elections are now.

In addition, the influence that bodies with inherent agency have over the system should be proportional to their public support, both in theory and in practice. Again, we will see what this entails as we move forward.

1.3 The Blind Break

We will have occasion to discuss the tools for achieving our goals later, but there is one category of tools that deserves to be addressed now. This is the "blind break", a category of tools in which political actors are forced to commit to their proposals and preferences prior to full resolution of the next phase in the process.

Example 1.3.1. In example 1.1.1, we have seen a simple example of a blind break. Parties to a dispute submit briefs *prior to* the selection of the three judges who will hear the case. If the briefs are submitted after the selection of the judges, then there is no blind break.

Definition 1.3.1. *blind break* : Any mechanism in which a multi-step decision making process leaves downstream steps partially indeterminate until earlier steps are completed, forcing political actors to make decisions on the basis of incomplete information.

The term *blind break* overstates the protection that can be achieved; any particular use provides only a partial screen from one step to the next. As a result I prefer alternate terms, such as *uncertainty screen*, *entropy screen*, *uncertainty buffer*, etc. This concept is similar to John Rawls' "veil of ignorance", though not exactly the same. This mechanism is tremendously powerful, and should be considered indispensable to democracy. Its power comes from the fact that it addresses a number of the core problems that confront the architect of a representative government.

Representative Integrity By placing an uncertainty screen between a decision maker and a final decision, corrupting information can hidden. This makes any resulting decisions more consistent with the underlying representative mandate.

Least Agency We want any given political actor to have as little power as possible, consistent with their responsibilities. It is better, for example, to take a given officer's preferred course of action and subject it to public scrutiny, then give that preference a weight based on the public assessment, rather than allow the officer to carry out her preference without the intervening step. That weight will then be used as a probability in a random selection.

Epistemic Modesty Decisions that are made deterministically have an intrinsic arrogance. Decisions with a random component, on the other hand, naturally include a second order measure, which can be interpreted as uncertainty. This means that proposals with low ratings still have a chance of being chosen. This is particularly useful in personnel decisions, where members of minority groups and people with unusual backgrounds can still attain office, even though a sample of citizens may give them lower ratings than more mainstream candidates.

This leads to diversity in the broadest sense. Not only does it give traditionally underrepresented groups greater weight, it also includes people who may feel marginalized on the basis of viewpoint, or life experience, or any other property one might wish. Randomness provides for effortless

diversity, without having to name or define the many groups who should benefit.

Proportionality When political parties joust for control, they do so with the goal of achieving total victory—the ability to pull the levers of government without restraint. This is in part an artifact of a system in which decisions are made deterministically. Deterministic decisions must be made by a single agent that is known in advance. A random process breaks this winner-take-all structure. Possible decisions can be submitted to a downstream process that selects one proposal on the basis of a probability.

Among other things, this makes political systems highly stable. Determinism leads to instability, as the difference between 49.9% and 50.1% is colossal, while the difference between 52.3% and 52.5% is virtually nil. Using proportionality and random selection eliminates this discontinuity.

1.4 Summary of Goals

Having set forth the terminology and concepts needed to discuss the structures of representative government, I will lay out the primary goals for the project. Many of these overlap to some degree.

1. **Agency:** Each political body must have sufficient agency to carry out its mission without resorting to shadow agency of any kind. The system should have no political slack.

2. **Representative Integrity:** Political actors should make decisions on the basis of representative information only. In other words, they be shielded from corrupting information to the greatest extent possible.

3. **Automaticity:** Political actors should control only the substance of public policy, not the procedures by which policy is made. Procedures must function automatically.

4. **Inevitability:** Any decision or action that must be taken, will be taken—on time, every time. Political actors will only influence the substance of that decision or action.

5. **Least Agency** Political actors should be allowed the least amount of deterministic control needed to carry out their mandates. Non-deterministic mechanisms (aka *blind breaks*, *uncertainty screens*, and *entropy screens*) should be used liberally to effect this.

   Least agency should not be confused with *policy minimalism* (or *libertarianism*), which is an ideological aversion to government intervention.

6. **Epistemic Modesty** Policy decisions—particularly personnel decisions—should reflect both a preference and a degree of uncertainty associated with that preference.

7. **Proportionality:** Ability to influence public policy should be proportional to public support. Currently, only the formal ability to influence public policy is proportional; in practice, proportionality is lost because legislative chambers have incomplete agency.

8. **Continuity:** As much as possible, each moment in time should be as important as any other. There will be no need to "form a government"; the government will always exist as a continuous entity. No all-powerful office like the U.S. Presidency can exist, and the change of office holders should be staggered.

9. **Convergence:** Decisions made through sampling should be the same as if the decision were made by the whole. In keeping with the probabilistic nature of the system, this can only be partially achieved. More importantly, the system as a whole should converge to some reasonable notion of the popular will, even if any given part cannot reflect the popular will exactly.

Chapter 2

Rights and Duties

While matters of government structure remain relatively obscure in the public imagination, the idea of rights seems to fill every man, woman and child with a sense of both power and awe. Once any proposition is declared a right, any request to justify said proposition meets with a posture of righteous indignation rivaling that of a zealot on hearing the most calumnious blasphemy. The analogy to religion is not misplaced, as the theory of rights seems to apply to any statement that a prominent political activists claims, regardless of whether or not any legal process has enacted this so-called right into law. In a recent debate of Democratic party candidates for U.S. President, each speaker seemed to feel the need to assert his or her "belief" that health care is a right, not a privilege, even though no such right exists under American law.

Legal doctrines, however, are not a matter of belief. Some legal guarantee either has or has not been enacted into law. If it has, that guarantee is a right, if not, it isn't. Perhaps a particular idea *should be* a right, but if so, then political agents (including citizen activists) must formulate that idea in particular language, then get it passed through a political process.

There is real danger in speaking of rights as articles of faith. Doing so requires some notion of natural or universal law: the idea that there is some abstract set of principals frozen in time which people must discover. This, in turn, leads immediately to the idea of revelation as a source of law. This revelation

might come from religious texts thousands of years old, or it might come from a political manifesto written in the 19th century; either way, it is dangerous to democracy.

This has led to a bizarre phenomenon in which activists refuse to subject their ideas to the will of a legislature, instead insisting that the judicial branch declare their chosen issue to be a right. It is as if judges are the high priests of some oracle whose pronouncements supercede all worldly authority. Undoubtedly frustration with the operation of legislative bodies is justified, but asking an unelected priesthood to rule by decree must be seen as giving up on democracy.

2.1 Rights from the Enlightenment

Enlightenment thinkers based rights theory on metaphysical grounds: either divine providence or natural law. Neither of these foundations are acceptable in modern terms, and insisting on transcendental origins for something as pedestrian as a legal doctrine actually undermines the strength of the claim. How many times has a legal right been undermined by reasoning that appeals to the supposed underlying metaphysics rather than just interpreting the plain language of the enacted right? In addition, transcendental sources of legitimacy are inherently singular, whereas the relationships that rights encode in practice have multiple parties.

Nevertheless, the *substance* of those rights has stood the test of time. The Enlightenment came after centuries of religious conflict, and the consensus they created—that governments should neither favor any religion, nor interfere with the peaceful practice of any religion—is now beyond question. The right to property has a more painful provenance, as it was caught up in the toxic question of whether people can be owned. But history did resolve that question, however destructively, so the idea that some notion of property deserves basic protection as a right must be considered essential, even if the extent of the right is disputed, particularly regarding intellectual property. Additional protections such as the right to due process of law and equal protection of law round out the original canon. More recent—but no less important—additions include legal equality on such criteria as race, gender, sexual orientation,

gender identity, etc.

2.2 Categories of Rights

Having establish that rights are a mere species of law, we wish to categorize rights so we can determine which ones are truly needed in building a new form of government. We divide rights into two broad categories: structural and statutory.

Definition 2.2.1. *structural right or duty* : A right or duty which is necessary to the legitimate functioning of the government.

Definition 2.2.2. *statutory right or duty* : A right or duty that is not a structural right or duty.

All of the rights defined at the time of the Enlightenment are statutory rights. The right to vote as understood at that time barely qualifies even as a right, as it was conditioned not just on being a white male, but also on significant property requirements. This is one of the great failures of democratic theory: the absence of any notion of rights that exist prior to, and apart from, the establishment of a government.

Statutory rights and duties (mostly rights) are the source of much heated activity concerning issues such as religious freedom, property rights, protection from intrusive state action without due process of law, and equality on the basis of race, ethnicity, national origin, gender, sex, sexual orientation, gender identity, etc. These are crucially important issues for any free society, but they are both logically and temporally subsequent to the establishment of a democratically legitimate government. Such rights are therefore little more than a sort of "super law", a law which is superior to ordinary law, but which otherwise occupies a similar status. The U.S. constitution does not distinguish between itself as a structural document and a document of basic rights, but we must make this distinction, since it lies at the heart of a great many misconceptions about democracy. For example, the right to vote is often spoken of in the same manner as the right to freedom from unlawful search and seizure. This leads to the error that voting rights can be taken away through a judicial proceeding in the same way that a search or seizure is lawful so long as

it is conducted in accordance with a warrant. Indeed, the fact that voting rights are treated as statutory rather than structural rights is a crucial destabilizing force in modern democracies.

This error has dramatic consequences in the U.S., where elections are routinely won by candidates who would likely lose if not for large populations of disenfranchised citizens. The misconception that underlies such a miscarriage of justice is between a right that is a *precondition* of democracy, vs one that is the *result* of it. Statutory rights are the result of democratic governance, while structural rights are what make a result democratic.

This leads to an obvious conclusion: structural rights cannot be abridged at the discretion of government for any reason. This reflects the fact than any limitation of a structural right would have to be effected by the government itself, which derives its legitimacy from those same rights. Such circularity is intolerable; any act of government to limit a structural right renders it undemocratic. In order to avoid this confusion, we exclude statutory rights from the constitution proper, and instead create a layer of law superior to ordinary law where statutory rights can be defined.

Definition 2.2.3. *constitution* : A body of law, superior to all other forms of law, that defines the structure of government, and defines all structural rights and duties binding upon citizens. Structural rights and duties defined therein can have no component that exists at the discretion of any government process.

Definition 2.2.4. *basic law* : A body of law, superior to ordinary law but inferior to the constitution, that defines substantive rights and duties binding upon members of society, citizen or other, human or other.

One point to notice is that structural rights and duties belong only to citizens. Non-citizens may have rights under basic law, but they do not participate in core matters of sovereignty. Statutory rights and duties can encompass non-citizen people as well as corporate bodies. Corporate bodies must be included, as failing to include such powerful entities does not diminish them, it liberates them from reasonable restraint.

2.3 Proposing and Deciding

In modern democracy, the lone structural right is the right to vote[1]. But vote for what? The slate of options available to each voter has as much to do with the governance of society as the result. Thus *proposing* and *deciding* must come under the democratic umbrella. Unfortunately, many notions of direct democracy (e.g. the referendum) deal only with the act of deciding. Others (e.g. the citizen initiative) attempt to honor each citizen's right to propose as well as decide, but in practice fail for a variety of reasons connected to their design.

In a representative chamber like a legislature, one's vote for a candidate delegates both proposing and deciding to the elected representative—not the candidate that one voted for, but the candidate who wins. This presents two problems: first, when the winner is not the desired candidate of a particular voter, that voter's equal rights cannot be considered validated, and second, even if one's preferred candidate wins, the problems identified in section 1.2 hardly suggest a full vindication of those rights.

In order to fully realize the structural rights that currently find their expression exclusively in the right to vote, we must permanently separate equal proposing rights from equal deciding rights. This distinction was recognized by the ancient Greeks, who called the equal right to propose *isegoria* and the equal right to decide *isonomia*.

Definition 2.3.1. *isonomia* : The equal right and duty of all citizens to participate in deciding all political matters, and the equal weight in all political matters of each citizen's final conclusion.

Definition 2.3.2. *isegoria* : The equal right and duty of all citizens to participate in advancing proposals for consideration by whatever mechanism is used to harness *isonomia*.

These are the only structural rights and duties in any democracy. We have phrased them as duties that each citizen must fulfill; in practice, however, this is mostly an obligation

[1]The right to vote should be a structural right, but modern democracies universally fail to protect it as such. For argument's sake, however, I treat the right to vote as structural from here on.

on the state to ensure that participation is *unbiased*. Modern statistics shows us that proper sampling can achieve far better representative outcomes with far smaller numbers than a biased process can, even with very large sample sizes.

The reader should be aware that while these concepts were used in the ancient world, my use of these terms may differ from ancient understanding. This is a manifesto, not a historical treatise.

Why Separate Proposing and Deciding?

Given that, in current systems, proposing and deciding are both delegated to legislative chambers, it is easy to miss just how different proposing and deciding really are. Deciding, which tends to get the greater focus, is actually the simpler of the two. Given a small set of options, any group of people can express a preference. Those preferences can then be aggregated into a final decision, which is then binding. The simplicity of deciding means that it is ripe for direct citizen participation. Indeed, once proposing and deciding are structurally separate, there is no reason to decide any major policy question other than through a citizen panel.

Proposing, on the other hand, is a highly complex creative act. If deciding is choosing from a menu, then proposing is not only writing the menu, but shopping for the ingredients, making the kitchen, mixing and preparing, and finally cooking the food—not to mention presentation and table service. This can only be done by an entity with inherent agency: the full range of ability to craft policy, train candidates, publicize itself and its ideas, etc. In order to make such a system democratic, these agencies will have to be regulated externally; that is, constrained by external mechanisms to adhere to a democratic mandate. Attempting to regulate them internally will not only be futile, but will hamper their effectiveness in navigating the vast and ill-defined space of potential policy.

I wish to stress that traditional notions of intelligence, competence and training are not the roadblocks that prevent citizen panels from carrying out the proposing function. Rather, it is the nature of proposing itself. Getting a group of independent people (that is, a group that is not organized into a corpo-

rate body) to come up with coherent proposals is a nightmare of psychosocial manipulation no matter how those people are chosen. This reinforces the lesson of the original sin of democracy: to the extent that traditional legislatures do generate coherent proposals, it is by creating internal corporate bodies.

The Marketplace of Democracy

Once separated, proposing and deciding become polar opposites in terms of structure. Proposing must be done by corporate bodies staffed by professionals who are essentially trying to satisfy a market for policy proposals. The currency of this market is not money, however; rather it is a score that is based on each citizen's equal right to propose, or isegoria. Deciding, on the other hand, is done directly by citizens who have sufficient time and resources to examine in depth the options given to it. They render their verdict on the principle of the equal right of all citizens to decide, or isonomia.

Some readers may object to using a market structure for democratic purposes. But even a hardcore Marxist should find nothing to oppose. Unlike a money-based market, the currency here is neither fungible nor transferable, and it cannot be accumulated and lent out at interest. What we are left with is the market mechanism without the corrupting influence of finance with all of its dark arts.

Modern democracy already functions as a market to some degree, but the only goods on offer are candidates and parties. The separation of proposals and decisions allows the policies themselves to be judged directly by ordinary citizens. This is both empowering to citizens and, equally as important, constraining to political elites. A political elite which can only submit proposals to citizens and hope for the best is captive to the will of the people (whatever that really means) to a far greater degree.

Separating proposing and deciding exposes the failure of the current political marketplace. Representatives are simultaneously producers and consumers of policy. It should be no surprise that a structure so obviously based on self-dealing should be perennially viewed as corrupt. It is as if, upon walking into a coffee shop, you pay a flat fee, and the barista simply

hands you whatever drink she thinks you want. What preferences would dictate what drink you receive? The needs of the coffee shop owners, the coffee producers, the company that manufactures the espresso machine, and the barista herself would all rank ahead of yours. Now imagine that there are only two coffee chains in the entire country. Even in parliamentary systems, there are generally only two or three major parties, with minor parties serving niche voters, and the need for 50%+1 means that any functioning government is divided into the ruling coalition and the opposition.

As we will show, separating proposing and deciding addresses both of these problems. The proposers (the producers in the market) can have proportional rights to advance policy for consideration by the consumers. This is true multiparty democracy, uncorrupted by the premature need for 50%+1. The deciders (the consumers in the market) can be randomly selected groups of citizens who are able to give a more considered and granular verdict on policy matters. The result, free of artificial duopoly and parliamentary self-dealing, will be a true democratic marketplace.

Chapter 3

The Legislature

I will now go through a series of possible legislative structures, examine their good and bad qualities, progressing to a structure that meets the minimum standards for democratic lawmaking. Our starting point is a single-chamber legislature of representatives, elected from single-member geographic districts of approximately equal population. This model covers both the British Parliament and the American House of Representatives to a first approximation.

As a mere assembly of people, this legislature lacks agency. Into this gap comes the notion of political parties, who provide the structure to actually get things done. Power over both proposal and disposal of questions is concentrated in the hands of party leaders, granting clear agency to the otherwise chaotic operations of a legislative body. This agency comes at a considerable cost, however. The core principles of both isegoria and isonomia are lost, as individual representatives must join one of the parties, where their own representative mandate is effectively lost in gamesmanship among the parties. Individual members face an impossible choice both when it comes to proposing and deciding: honor their representative mandate (I assume that directly elected legislators have a mandate to actively represent their constituents, though I am agnostic on what flavor of representation is implied) and risk losing influence by offending the party leaders, or allow their representative mandate to be subsumed by party concerns.

The most egregious violation of the democratic ideal is the conflation of proposing and deciding. Our first task is to separate these functions.

3.1 Separate proposing and deciding

Separate Chambers The simplest way to separate these is to create two otherwise identical chambers, one for proposing, the other for deciding. Even a casual observer of politics will see that this solves nothing. Due to the power of parties, these two bodies will in all likelihood form one of two configurations:

1. One party (or coalition) controls both chambers: In this case, the two chambers will act essentially as a single chamber. The manner in which the ruling party operates might change, but the underlying distortion to both isegoria and isonomia remains.

2. Split control: In this case, we get gridlock. The only way to get anything done is for adversaries to agree on something. While this might be a political accomplishment in the conventional sense, it's hard to see this as a vindication of either isegora or isonomia. Any proposal that gets enacted reflects a deal among the parties, rather than the representative will that is the legislature's true mandate.

Essentially, this result is the same as having two identical chambers. A demonstration of this principle can be seen in the U.S. Constitution's origination clause, which states:

> All Bills for raising Revenue shall originate in the House of Representatives; but the Senate may propose or concur with Amendments as on other Bills.

This provision is a formality. The ruling coalition of the Senate will not even allow a vote on any bill unless they are given equal status in its writing. In practice, bills for raising revenue are negotiated between the House and Senate just like any other bill.

Separate Chambers with Sortition One interpretation of the previous case is that the party system renders the separation of proposing and deciding ineffective by acting across the two chambers. If this criticism is accurate, then populating one or both of the chambers with randomly chosen citizens should alleviate the problem.

As we have explored before, the deciding (isonomia) function is the best candidate for citizen panels. We now consider a proposing chamber consisting of professional politicians representing geographic constituencies, and a deciding chamber of randomly chosen citizens.

While this is an improvement, there are still substantial distortions to both isegoria and isonomia. First of all, the logic of party control does not apply exclusively to professional politicians. Perhaps the deciding chamber starts out less partisan than before, but its members are people and can be brought into the party structure after selection. Even if they are not brought into the party structure, their identities are known to the proposing chamber before that chamber proposes anything. Thus the proposing chamber can propose laws that are tailored to the particular members of the deciding body, rather than to the public good.

Separate Chambers with Post-Proposal Selection We can force the proposing chamber to write bills tailored to the public good (or, at least, *not* tailored to particular members) by waiting to populate the deciding chamber until after a slate of bills has been advanced by the proposing chamber. This is a significant advance achieving the ideal of isonomia, as there is no way for the particular composition of the deciding body to influence the choices that will be presented to it.

There are still substantial distortions to isonomia, in which each bill is considered on its stand-alone merits. Because the disposing body has been given a slate of bills, a considerable amount of horse trading can happen, in which votes are traded within the disposing chamber across bills that may be completely unrelated. In addition, there is no guarantee that what passes will make any sense. Bills that contradict each other in substantial ways could both pass, creating a nightmare for the executive and judicial branches.

We have also not dealt with the issue of vote selling. In any system where votes are public, vote selling is virtually impossible to prevent, as an interested party can simply reward those who voted in favor of their bill. Sacks full of banknotes might be illegal, but there are always ways to reward the profit-seeking voter, the most obvious being with a job. While this is done after the fact, as new citizens are chosen, word will spread quickly about how to make one's vote pay.

Post-Proposal Selection with Single Issue Chambers and a Secret Ballot Our next iteration introduces two innovations: A secret ballot, and a disposing chamber that is empowered to consider only a single bill or question. This gets us much closer to isonomia, as the members of the disposing chamber cannot trade favors. Horse trading depends on having multiple proposals, in which one person's vote on one issue can be linked to another person's vote on an otherwise unrelated issue. Deliberation is free of obvious manipulation, as the only reason for members of the disposing chamber to communicate is to influence by persuasion or to assist with research.

3.2 Formal Isonomia

We have discussed isonomia extensively from a historical and conceptual perspective. Now we seek to formalize the concept in a way that can be applied. We start with the strongest form:

Definition 3.2.1. *strong isonomia* : A condition in which proposals are either accepted or rejected according to the equal vote of each citizen, acting on behalf of his or her view of the public good.

This is a wonderful ideal, but clearly it cannot be applied directly. For one, getting everyone to devote the time and energy to vote on every bill is infeasible. For another, there is no way to force citizens to act in the public interest. We deal with the first issue by introducing a second isonomia condition.

Definition 3.2.2. *strong isonomia (sampled)* : A condition in which proposals are either accepted or rejected according to the equal vote of large random unbiased samples of the

citizenry, with each chosen citizen acting on behalf of his or her view of the public good.

This is a condition which is feasible as to the use of citizens' time an energy, but we still have to address the "public good" question. While there is no way to force anyone to act in the public interest, we can remove obvious temptations to act against it. For that, we formulate the following:

Definition 3.2.3. *weak isonomia (sampled)* : A condition in which proposals are either accepted or rejected according to the equal vote of large random unbiased samples of the citizenry, with each chosen citizen free from any structural distortions that might tempt him or her to act against the public good.

By *structural distortions*, we are referring to the problems we discussed above. Here is a list:

1. **Factionalism:** acting on behalf of "teams" within the deciding chamber.
2. **Proposing conflation:** when the rules of deciding chamber are written so as to favor a certain outcome.
3. **Vote trading:** when actions upon otherwise unrelated proposals are connected by agreements made within the deciding chamber. These agreements need not be formalized in any way.
4. **Vote selling:** when actions within the deciding chamber are made with the expectation of personal reward. This is not the same as literal bribery (suitcases full of cash). Instead it refers to legal or quasi-legal activity in which a vote is altered with the hope of personal benefit.

Now we have a version of *isonomia* that we can hope to use in practice.

3.3 The Jurga

From our discussion of a legislature above, we assert that our last model legislature (Post-Proposal Selection with Single Is-

sue Chambers and a Secret Ballot) meets the conditions of *weak isonomia (sampled)*.

At the core of isonomia is the notion of a body composed of randomly selected citizens who are assembled to render a verdict (decide) on a set of proposals made to it.

Definition 3.3.1. *jurga* : The jurga is a body with the following properties:

1. Randomly selected from the entire body of citizens, with a number large enough to ensure that it can reasonably considered descriptively representative of the general population.
2. Assembled to consider one and only one question.
3. Assembled after all options for the question have been fixed and published.
4. Assembled after all procedural rules for the assembly have been fixed, including schedule, voting method, and success criteria.
5. Compulsory on all citizens.
6. Jurga service is a structural right and duty, and therefore no citizen can be disqualified by any discretionary act of government.

The term "jurga" is a portmanteau word of my own coinage. It combines *jury*—a panel of citizens used to pass judgment in judicial proceedings—with *jirga*—a body of tribal leaders assembled to make decisions in Afghan culture. This etymology reflects the jurga's purpose: to expand participation of ordinary citizens in political decisions.

The jurga is, in my view, the highest expression of isonomia that can be practically attained in large modern states. Thus far, however, we have restricted our consideration only to the requirements of isonomia. For example, we could assemble a jurga, and then give it only fifteen minutes to consider a highly complex piece of legislation. Technically, this would meet the standards of isonomia, but clearly would not be considered democratic in a broader sense. In order to achieve an epistemically satisfactory outcome, we will add further requirements as we move along.

3.4 The Proposal Chamber and Isegoria

Proposing legislation is a very different animal from deciding. Direct isegoria—allowing every citizen equal rights to propose—is impossible, as every proposal would require the full attention of a jurga. Assembling a jurga with sufficient time and resources to come to a satisfactory conclusion can only be done on a limited number of proposals. We will now consider a few possibilities for the proposing function until we reach one that meets our minimum standard for isegoria.

Returning to our previous example, the proposal chamber looks like a standard legislative chamber, except stripped of the deciding function. So how do legislative bodies propose legislation now? At present, isegoria is preserved in theory (within the chamber, anyone can propose a bill) but in practice is controlled by party leaders. This is more or less true in both presidential and parliamentary systems.

The parties effectively enforce a type of proportional isegoria, where the proportions are determined by party representation and their various coalitions. I say *determined by* rather than *proportional to* because the need to obtain 50%+1 distorts the process away from the actual proportion of votes in the chamber. A coalition of 50%+1 effectively gets all of the power to propose, whereas the remaining 50%-1 is shut out. With this in mind, let us examine our first potential chamber for the proposing function.

Separate Chambers with Proportional Representation in the Proposing Chamber All we have done here is replaced territorial constituencies with proportional representation, in which voters in the general election choose parties rather than members from their constituency. This is a better reflection of how legislation is actually proposed—that is, by parties through their leadership. However it does nothing about the 50%+1 problem. There can be no real claim to isegoria, as those who supported the minority coalition have their proposal rights discarded, whereas those who are part of the majority coalition have theirs supercharged.

We have called this a proposing chamber, but in fact the 50%+1 problem makes this chamber a hybrid proposing and

deciding chamber. The ability of the ruling coalition to prevent the opposition from proposing anything is effectively a form of deciding.

Proportional Representation with a Lower Threshold When dealing with the deciding function, 50%+1 is the minimum threshold, as a lower threshold makes it possible to pass both a proposal and its negation. There is no such restriction on the proposing function, however, as submitting both a proposal and its negation merely presents the deciding chamber with a redundancy—annoying, perhaps, but not fatal.

We could therefore set a lower threshold for the proposing chamber. While this grants some relief to political minorities, it does nothing to resolve the isegoria problem. If X < 50% is the threshold, then coalitions of X+1 get unlimited proposal rights, while lesser coalitions get none. As X gets lower, small parties and coalitions get disproportionate rights to propose. There is no happy medium. Any value of X fundamentally distorts the notion of isegoria.

Proportional Representation with Proportional Proposing Rights In this scenario, the chamber consists of parties which are not only represented proportionally, but actually have an inherent right to propose legislation to be taken up by the deciding branch (i.e. a jurga). As one possible way of doing this, imagine a chamber with 100 members: 50 from party *A*, 30 from party *B* and 20 from party *C*. In this case, for a given session of the chamber, party *A* could propose 5 bills for consideration by a jurga, party *B* 3 bills, and party *C* 2. This is a system that is begins to match our intuition of isegoria. With this in mind, we introduce two definitions.

Definition 3.4.1. *direct isegoria* : A condition in which all citizens can propose laws in equal measure.

This is clearly not feasible. As we have argued previously, isegoria rights must be channeled through some sort of corporate body. Thus we get:

Definition 3.4.2. *proportional isegoria:* : A condition in which

citizens vote for agents, and each agent has proposal rights in proportion to its share of the overall vote.

It is worth noting that no legislature in the democratic world comes anywhere close to proportional isegoria.

The last chamber we discussed (*Proportional Representation with Proportional Proposing Rights*) meets the condition of Proportional Isegoria. However it is far from ideal. For one thing, is it even a chamber in the ordinary sense? If parties have automatic proposal rights, why even meet? Why have distinct members, why not just assign each party a number representing their proportion of the whole?

In addition, there is the issue of limiting the scope of legislation. A party with the right to propose one bill can simply include all of its policy wishes in that one bill. Meanwhile, a party with the right to propose two bills can split its wishes up to be considered separately, but does the first party really have less proposing ability if it can still get everything it wants? These are important concerns that we will address moving forward.

3.5 The Proposing Service

We have created a bicameral legislature that now meets what we consider to be the minimal conditions of a representative legislature: *weak isonomia (sampled)* and *proportional isegoria*. In the jurga, we have a body that is largely free from the distortions that permeate the deciding function in democracies today, so we consider it satisfactory, at least to the extent that we have defined it up to this point.

The proposal function, on the other hand, has serious flaws. We have retained the structure of a traditional legislative chamber. Such chambers are often governed by obscure rules of procedure, which empower some members and disempower others in ways that clearly violate proportional isegoria. If a party in our system wishes to propose a law in accordance with its (proportional) right to do so, can any procedure prevent this? For example, in the U.S. Senate, the filibuster has historically allowed the proposal function to be hijacked by unlimited debate. Clearly such a provision would

fundamentally undermine proportional isegoria.

What of amendments? Traditional legislatures function on the theory that a bill is the product of the entire chamber, not a party within the chamber. Again, however, allowing amendments to a bill within our chamber would fundamentally distort proportional rights. If the right to propose legislation is to mean anything, the party that owns that right must have full control over the final product.

And what of the members of the proposing body? In the traditional model, these members have discretion to act on any measure taken up by the chamber. But as we have seen above, this is fundamentally incompatible with proportional isegoria. As a result, individual members can really only act within their own party caucus. Can they change parties? Absolutely not: the number of members of a given party in the chamber is an expression of that party's support in the population. Each member's position in the chamber is really just a numerical proxy for its vote share.

Eliminate the Proposal Chamber

Proportional isegoria provides a lens through which to view "parliamentary procedure", the various arcane codes of conduct that govern proceedings in legislative chambers. The most generous view of these codes is that they are an attempt, however ineffective, to approximate isegoria. The failure of parliamentary procedure to protect the equal proposal rights of the electorate in even an approximate sense leads us to conclude that traditional legislative chambers are an attempt to "square the circle". It is simply impossible to create a set of parliamentary rules that accords with isegoria.

We therefore eliminate the proposing chamber, at least in the traditional sense. Since the authority to propose is vested entirely within the parties as corporate entities, it makes far more sense to simply assign each party its numerical power to propose, and leave it to each party to govern itself internally.

There are a few system-level decisions remaining.

1. How are parties created or eliminated?

2. How are the vote shares of each party determined?

3. How are each party's proposal rights to be expressed in practice?

3.6 Party Structure

One of the great problems of democracy in its current form is its failure to define and regulate political parties. Parties end up as amorphous blobs with both enormous power and unaccountable governance. This failure is due largely to the fact that parties are not defined within the constitution, either in the U.S. or the U.K.

Parties are not mini-democracies

One refrain that comes up in the U.S. context is the idea that parties themselves must be democracies in miniature. This, however, contains an obvious contradiction: parties cannot be both representative themselves and official elements of another representative system. This would lead to an infinite regress, as each party would have its own mini-parties, and they would have mini-parties, etc.

In a sense, this is exactly what happens with the primary system in the United States. Prior to a general election, there is a primary election in which members of the party vote on who should be a candidate in the general election. And within each party there are various factions that vie for dominance. But these mini-parties are even less accountable than their parents. This leads to a common phenomenon in which candidates run very different, even contradictory, campaigns in the primary and the general election. Again, it is easy to point the finger at two-faced politicians, but the problem is structural.

It's also unclear what group a party is representing. The citizenship of a country is a well-defined body of people, but membership in a party is self-selecting. This leads to many opportunities for "tactical" voting. For example, Rush Limbaugh encouraged conservative voters to vote in the 2008 primary in favor of Hilary Clinton in order to weaken the candidacy of Barack Obama.

Parties are the agents of their proposing share

Each party gets the right to propose legislation in proportion to its share of the vote. But this is not an institutional guarantee that the party will act on behalf of its electoral mandate. For example, if a party both exists in perpetuity and is funded at a rate that is unrelated to its vote share, then the party has little institutional incentive to propose legislation that reflects the popular will. This is particularly true of legislation that restricts opportunities for corrupt dealing.

Let us look at an example that meets the condition of proportional isegoria, but clearly fails for other reasons:

Example 3.6.1. The proposing function consists of two permanent parties, funded through a system of donations from individuals and corporations.

This fails because each of the parties is functionally serving its donor base. Since the existence of each party is guaranteed, only the proposing share is at risk, and there are many instances where one of the parties might conclude that it is better to propose things that the donor class wants (or refuse to propose something its voting base wants), even if it means risking some amount of proposing share. Also, donors can donate to both parties, meaning that the functional independence of the parties is compromised.

We can now formulate some structural principles for parties. In creating these principles, however, we are really building entities that are very unlike political parties as they exist today. Consequently I give them a new name, although I will, at times, still refer to them as parties.

Definition 3.6.1. *proposing agency* : *proposing agencies* are a group of corporate body with the following properties:

1. They are funded exclusively from the general budget, sufficient for all their operations. The funding amount must ordered by vote share: proposing agencies with a greater share must receive at least as much as parties with a lesser share. However, funding should not be proportional to vote share, as smaller agencies would not have sufficient funding to carry out operations.

2. Funding allocation for each proposing agency (as opposed to the overall budget for all the proposing agencies) must consider vote share alone; no other factor can be involved.

3. Proposing agencies must be oligarchies internally, governed by a board of directors that is large enough to ensure continuity, but small enough to act as a unit. Vacancies must be filled by the board itself, with no outside influence. Any outside influence creates "two masters".

4. Proposing agencies that fail must die. The termination of agencies with low vote share must be a regular, automatic occurrence. A proposing agency that is terminated must be replaced by a new agency, which means, effectively, a new board. Members of the new board cannot have been members of any other proposing agency board, in order to ensure "new blood".

These structural principles express one basic fact: Parties must depend exclusively on their vote share from the general electorate for all of their success or failure. Any other factor means that parties are serving two masters, which violates proportional isegoria, at least in an operational sense. Among other things, this principle makes clear that party primaries are as unrepresentative as they are ridiculous.

Party governance is an area in which the phrase "democratic legitimacy" is often used to insist upon the use of highly unwieldy mechanisms for the internal regulation of political parties as corporate entities. The use of this emotionally charged phrase masks a fundamental misunderstanding of the role parties should play. Parties are, fundamentally, the corporate bodies that channel isegoria from each individual to an aggregated proportion, where it can be expressed with real agency. Political parties do not represent constituencies, they *offer choices to voters*. This is essential to proportional isegoria, since voter preferences can only be considered valid if voters have a meaningful range of options.

We choose oligarchy for the internal governance of parties in accordance with the Iron Law of Oligarchy. We do so not out of any love for this rule, but simply out of recognition that, in fact, oligarchy is the asymptotically stable governing state

for any single organization to maintain. The democratic legitimacy of political parties has nothing to do with the fact that they are oligarchies. Parties get their democratic legitimacy from their vote share alone.

3.7 Proportional Proposing Rights

Proposing rights must be proportional to vote share, but how is proportionality to be implemented? There are a number of possible ways, and finding the right one is critically important.

Deterministic Proportionality

First, we assume a "rolling" model of proposal, under which a new question is considered at fixed intervals of time. We have a ten month term, with one new proposal considered every month, meaning that ten separate jurgas will be convened. We suppose now that, for each of the jurgas to be called, the parties that will make proposals are determined at the start of the ten month legislative session. As soon as this determination is made, we can expect a frenzy of dealmaking. Each of the parties can see that for one jurga they will be matched against one particular party, and in another jurga, a different party. Horse trading is the inevitable result, as parties agree to include a certain provision or question over here in exchange for a similar favor over there. Even the mere fact that the competing parties are now known changes the landscape, quite apart from any dealmaking. Knowing which party will write the alternative bill changes the bill writing strategy. All of these facts must be considered corrupting information.

The jurga, of course, limits the scope of dealmaking; parties can only propose, and insider deals in legislation may turn off members of the jurga. Still, slipping small favors into larger bills may still go unnoticed, and "excessive determinism"—in this case, announcing the competitors in each contest before the proposals are made—gives parties more freedom than we would like.

Non-deterministic Proportionality

We add another uncertainty buffer by requiring that each party make its proposal before the parties are chosen. Final party selection will be done at random, weighted by vote share, independently for each jurga. Making the selection in this fashion has a number of healthy effects:

1. Parties write all their proposals as if they are competing against all other parties, not just against those that are selected.
2. Parties do not know deterministically how many future opportunities they will get or when those future opportunities will arrive, forcing them to focus on the proposal at hand.
3. Voters get to see honest proposals from all the parties. Under deterministic proportionality, any party that is not selected for a given jurga can claim that they would have done anything. This leads to false promises: assuring your supporters that you would have done things that, if presented with a real situation, you would not have done. In non-deterministic proportionality, every situation is real.

Non-deterministic proportionality separates crafting policy from enacting policy to the maximum degree practical. Each party writes a proposal, then crosses its fingers and hopes, first that it will be selected for consideration by the jurga, and then that the jurga will approve of its offering. A political party that is constrained in this way is truly a different animal from what we see today, as it has no way to achieve a policy objective other than to write a better bill, as judged by the jurga.

3.8 How to Put the Question

Bills advanced in a traditional legislative chamber are almost exclusively voted on in a binary manner, “Yea” or “Nay”. Ultimately, every action taken must be binary in some sense—adopt a measure or not. This is a discouraging fact from the

point of view of democratic theory, as it means that, ultimately, the supporters of a measure must either win or lose, while its opponents lose or win as the other side of the same coin. The "yea" or "nay" nature of political decision making tells us is that "equal political rights" and "government agency" (the ability of a government to follow a particular course of action) are fundamentally in tension, and that the expression of equal political rights must ultimately give way to a decision. This decision, being a single, unified set of actions, cannot preserve equality in any substantive way. This is true even with more sophisticated voting mechanisms, such as ranked choice voting tabulated with a Condorcet method. I refer to this as the "agency-representation conflict".

Identifying this as the central tension of democracy allows us to move forward with greater clarity. Under current democratic practice, the need to come to a decision pollutes every aspect of the process. Bills are not even proposed because they will never pass, and we know they won't pass because the deciders are known in advance. Conversely, bills are proposed even though their own sponsors dislike them in order to score political points. Representatives vote against the bills that they themselves sponsor in order to preserve parliamentary privileges.

The main epistemic goal of the proposal mechanism is to shield the proposal from the final decision as much as possible. Proposing agencies must face the greatest level of uncertainty about the outcome of the process, consistent with isegoria and isonomia. I propose to surround the proposal process with a series of uncertainty buffers. This will have the effect of forcing parties to focus on crafting measures that appeal to the electorate generally, rather than trying to play political games. Parties in such a system are constrained to focus on the *representative* side of the ledger, whereas currently they focus on the *agency* side.

In this reading, "representation" is a bit like the wave function in particle physics, and "agency" is the collapse of the wave function that occurs when a quantum system interacts with an observer. The goal here looks much like the goal in quantum computing: maintain the uncertainty associated with the wave function (the superposition of states)

for as long as possible, while using a process to push the system probabilistically toward a solution. Only at the last minute do we induce a "collapse", by convening a jurga.

We have already introduced the first uncertainty barrier: the jurga itself. Note that it is not merely the random selection that give the jurga its high uncertainty, it is the fact that it is selected after the measure in question has been published, the fact that each jurga is convened to consider only one question, and the fact that the vote is by secret ballot.

We wish to place questions before the jurga in a way that gives people enough choice that they have a sufficient range of possible solutions to a problem, without overwhelming them with superfluous choices. This "goldilocks" zone seems to have been found by the Deliberative Polling Project. Its panelists are presented with a single coherent policy question, and then given a small number of options to choose from—usually five.[1]

We wish to emulate this format. The DPP, however, formulates both the question and the options by itself. This depends on having a single trusted authority, which certainly cannot be assumed in political systems. Here we run squarely into perhaps the most persistent and vexing problem in political theory, "quis custodiet ipsos custodes" or, "who guards the guardians"? I believe that this problem can only be properly addressed by ensuring that the people themselves guard the guardians, through the jurga.

Getting this to work in practice involves some complexity. The jurga is an enigmatic institution. It can only answer questions that have been put to it in a highly structured way, and it has no native memory, as each jurga is composed of a new batch of randomly chosen citizens. As a result, a task that might be simple for a corporate body takes on greater complexity. Much of this extra complexity is already implicit in what individuals and corporate bodies do on their own. The limited nature of agency granted to the jurga means that what a person would do implicitly must be formalized.

First and foremost, each and every question presented to a

[1] see the polls listed at https://cdd.stanford.edu/what-is-deliberative-polling/, where most polls have five options. However, there are as few as four options and as many as nine.

jurga must have a predefined goal and scope. No jurga should ever receive open ended proposals on any matter; each jurga will address a predefined topic with an explicit set of goals. This topic must be legally binding: if the jurga approves a bill that contains provisions that are not germane to the topic, those provisions should be struck down by the judiciary.

But what is the source of this topic? Ultimately it must be the same as any democratic proposal: it must originate from isegoria and isonomia, which in jurga democracy means a jurga will decide from among options submitted to it by the proposing agencies. Legislation will essentially be a two step process. A first jurga will pick a topic, then a second jurga will decide upon proposals addressing that topic. This may seem cumbersome, but this is exactly how individuals and corporate bodies make decisions. First, they define a problem to be addressed, then they come up with solutions, usually narrowing them down to a "short list". Finally, there is a deadline by which a decision is made. With inherent agency, all this can be done in an informal way. But the jurga has only procedural agency. This limited grant of agency gives the jurga its legitimacy, but it comes at a price: we must formally define processes that would be taken for granted in other contexts.

3.9 Types of Legislation

Our two part proposing process works for large, revolutionary legislation. We expect to use this mechanism to address questions like, "How can we reform the education system for the 21st century?" or "How can we build a clean energy infrastructure?". But most legislation is smaller and less interesting. Even good laws need to be amended over time, and good legislation should include levers to adjust policy in response to events. We therefore distinguish between two kinds of proposals placed before a jurga: constitutional and statutory.

Constitutional Proposals

We have already covered constitutional proposals for the most part. These are the big pieces of legislation that follow the two-part procedure outlined above. As this is the broadest—and

hence potentially the most dangerous—channel for changing the law, we should put some restrictions on it.

First, the question formulated in the first phase of the process is binding. Thus if a bill that passes into law contains provisions that are not germane to the original question, the judicial branch must hold those provisions (not the entire law) null and void. Judicial nullification is already a well developed practice in the U.S. and other countries. This provision also ensures that the jurga that decides which question to consider is, in fact, exercising isonomia. The topic settled upon is not just a proposal, it is law.

Second, these bills should be posed relatively infrequently, perhaps once or twice a year. This reflects the fact that they will challenge jurgas more than other proposals, and will therefore require more time to consider. Also, they should be strictly sequential: the process of considering one constitutional proposition should terminate completely before the next is initiated.

Constitutional proposals should not be confused with constitutional amendments, which are changes to the constitution itself. A flow chart of process appear in figure A.1.

Statutory Proposals

Statutory proposals are questions defined within a constitutional proposal for submission to a jurga. It is easiest to look at this from the perspective of an example.

Example 3.9.1. *The minimum wage under a labor law bill*

In this example, a constitutional proposal is passed under the question, "How can we structure wages and employment law to increase the prosperity of workers?" (If this question seems to have a left wing bent, keep in mind that it would have been chosen by a jurga that presumably had options reflecting different ideologies). Under this question, a law is passed containing the following provision: "Each year a proposal will be put to a jurga with the following question: 'What should the minimum wage be for the upcoming year?'".

In this way the law can empower the body politic to take direct action on matters of policy. The potential uses for statutory propositions are endless. It is reasonable to assume that

the vast majority of jurgas would be statutory. It doesn't make much sense to describe all the possible uses of statutory proposals, but I discuss three uses that I anticipate would occur most often in appendix A.1, along with some constraints that must be placed on this powerful tool.

If a proposal involves only a single parameter, there is actually no need for the proposing agencies to play any role after the initial constitutional proposal has passed. In the minimum wage example, we can simply ask each jurgor to input his desired minimum wage, then take the average (mean or median). Some care must be taken with the aggregation method; the mean in particular overweights outliers. For example, we can require that jurgors input a wage that is within 10% of the previous minimum wage. This is where the jurga really shines: taking decisions that are simple and incremental, but powerful over time, and truly democratic. I call this sort of proposal an *anonymous proposal*, and a jurga called for such a purpose an *anonymous jurga*, reflecting the absence of a menu of options provided by the proposing agencies.

Example 3.9.2. Here is an example of a constitutional proposal, illustrating the full process. We consider the three parties (proposing agencies), with party A having 50%, party B 30%, and party C 20% vote shares. At regular intervals, the parties have the opportunity to propose questions for legislation. They propose the following goals:

Party	Goal
A	Increase the availability of ice cream to all citizens.
B	Boost space travel by building a giant cannon.
C	Make sidewalks springier to prevent foot pain.

These goals are problematic for a few reasons. The statement of a goal should express some desired improvement without specifying the means or exact success criteria. The first goal requires the availability of ice cream to be increased for all citizens; a bill that only increases it for *most* citizens, or which generally makes ice cream easier to obtain in most places, should be considered a valid proposal. Similarly, party B insists that building a giant cannon is the right way to gain access to space. The goal of boosting space travel is

legitimate, but specifying the means is not. For party *C*, the goal is really preventing foot pain; springier sidewalks are just a means.

The jurga will learn about these considerations during orientation. The goals will not be edited in any way, however; it is up to jurgors to make the distinction themselves. In addition, the goal is binding on the final law.

Once these options are finalized, two are selected randomly, weighted by the vote share of the party. In this case, parties *A* and *C* have their goals selected. These two goals are submitted to a jurga, who deliberate and vote on their preferred option. The jurga selects the goal from party *A*, reflecting the overall popularity of ice cream. The jurga is then dismissed.

Now that a goal has been established, all three parties submit bills to address this goal. The bill from party *A* is automatically included in the final two, because party *A* won the first round. The second option will be chosen by random draw, weighted by vote share of the proposing agency.

Here are the bills submitted for final consideration:

Party	**Solution**
A	Put low cost ice cream dispensers on every corner.
B	Have a "free ice cream day" once a month, and establish rules for the roundness of motorcycle tires.
C	Give subsidies to ice cream makers.

Party *B* wins the draw, so the bills of party *A* and *B* are advanced to a jurga—a new jurga, not related to the previous one. In addition, a "no action" option is included, so that the jurga can reject both proposals.

The jurga selects the "free ice cream day" from party *B*. The results are published and this bill becomes law. The law, however, contains a provision about motorcycle tires that is unrelated to the original goal. The courts will nullify this provision whenever it arises in an actual case. For clarity's sake, there may also be a special judicial procedure to nullify obviously nongermane provisions before they arise in real cases. Only the nongermane provision should be nullified; the rest of the law should be retained.

It may seem wasteful to write a bunch of proposals, but then not submit them to a jurga. But if every party can submit its proposals to every jurga, we lose isegoria. Requiring parties to write proposals before the selection process presents them with greater uncertainty—uncertainty that is proportional to vote share, reinforcing isegoria. It also gives voters better information and hinders parties that try to demagogue issues in which they were not selected.

We include one exception to this rule. The party whose question is chosen by the first jurga is automatically included in the bill writing phase. This helps minimize gamesmanship. A small party, for example, might try to write a question in order to hurt a larger party on an issue that is weak for them. The party will do this knowing that there is very little chance that it will be selected for the writing phase. Granting this privilege discourages gamesmanship, while providing a larger incentive to write the best question possible. This also illustrates the fact that uncertainty buffers are a means, not an end. When introducing uncertainty helps, we use it. But if determinism does the job better, we do not hesitate to use that as well.

Treaties

Dealing with the outside world puts the greatest stress on democracy. The mechanisms we have seen thus far assume broad procedural latitude to make decisions slowly, and with significant constraints. Dealing with matters such as treaties, natural disasters, and war tests this latitude. Some compromises to our ideal must be made to deal with these effectively. As always, the strategy is to figure out just the amount and type of agency needed, and delegate exactly that and no more.

For treaties, the main challenge is unity: successful negotiations require a single, unified agent. Most systems handle this by delegating treaty negotiation to the executive, leaving only ratification to the legislature. But to accord with isegoria, treaties in jurga democracy must be negotiated by the proposing agencies, and submitted to a jurga for ratification. I have outlined a procedure for this in appendix A.1. I will treat disasters and war when discussing the executive.

Rolling Elections

There is a pleasant side effect to the non-deterministic approach. We are not allocating proposal slots in a block, so we can treat the vote share as a continuously changing quantity. There is no need to hold general elections as a single, discrete event. We therefore use a rolling election. Basically, each voter is placed in a voting cohort. Each cohort votes at a particular time during the election cycle, with the vote share calculated on the basis of all cohorts over the length of the election cycle.

For example, if the election cycle is two years long, and we have two cohorts per month, we end up with 48 "mini-elections". The ballot has no individual candidates. Voters instead rank the parties in order of preference. The most recent 48 results are used to tabulate the overall score. The election cycle is continuous; each new mini-election simply replaces the oldest mini-election from the previous round.

Holding a rolling election relieves considerable stress on the political system. Currently, elections held at a single point in time are national traumas. Like most high-stakes events, they favor cheaters and psychopaths, who can play games of electoral chicken that make decent people cringe. We wish to lower the stakes of any single event whenever possible.

Election by Grand Jurga

The rolling election model depends on getting every single citizen to cast their vote ranking the proposing agents in order of preference. This is a tremendous logistical challenge, since in keeping with our reliance on unbiased sampling, it really is important for the government to chase down every citizen. Running this rolling election, then, is actually much more intensive than current voting practice. Every eligible voter must be compelled to vote. In fact, this should be the standard throughout the so-called democratic world.

Instead, we can convene a very large jurga every week or two, consisting of perhaps 10,000 randomly chosen citizens. This jurga, which I call a grand jurga, would work for a shorter period of time than most jurgas; maybe a week or even just a few days. This jurga would update the vote shares of the

proposing agencies by ranking them in order of preference, as before.

To be precise, the "vote share" is not really a share any more, it is just a score. But there are both practical and epistemic advantages to doing it this way. Practically, the government has to chase down a far smaller number of people to perform their duty as citizens. Epistemically, a grand jurga gives jurgors a chance to examine the proposing agencies' records in depth, with no distractions.

I am torn here. The act of voting is not just a way to make decisions, it is a form of inclusion in the society as a whole. Without even a single duty that regularly ties citizens to the whole, I fear for the political morale of the polity. The best government in the world will still fail if too few of its people believe in it. Belief and participation are strongly linked.

One way out of this bind is to use the grand jurga approach, but vary the size of the grand jurga so that a significant percentage of the population is called for service. The ordinary jurgas we have discussed up to now do not use that many people. In round numbers, we might have 1,000 jurgas of 1,000 citizens each. This is a mere 1,000,000 people—not a large number in a big country. And this is almost certainly an overestimate. Ordinary jurgas will in fact be smaller than 1,000 people, and 1,000 jurgas is more than needed for ordinary government functioning.

With grand jurgas, we can target a use rate of, say, 3% of the population every year. In other words, the size of the grand jurga will be adjusted so that the overall rate of jurga service will be 3% per year. This means that a significant portion of the population will be called for jurga service at some point in their lives. In addition, most people will have a relative or close friend who is called for service in any given year. This can close the gap of democratic morale without the heavy lift of pulling every citizen into a polling booth, or the epistemic problem of having voters who do not have the time or resources to deliberate effectively.

Ballot Expressiveness

Thus far, I have limited the expressiveness of the ballot to ranking the political parties on a single axis. Realistically, it makes more sense to give voters (or jurgors on a grand jurga) a number of axes on which to express a preference. Most obviously, the parties should be ranked separately for the three branches of government (legislative, executive, and judicial); in this case, the ballot would consist of three separate rankings of the political parties. There are many other axes we could choose, but there is a limit to the bandwidth of voters or jurgors. It is a bad idea to fragment the ballot too much. I would perhaps add one or two more axes for the executive branch, which is by far the largest branch, and which has a direct impact on all areas of public life. The executive can be divided into three parts:

1. foreign and military policy
2. domestic services
3. finance, treasury, and monetary policy

In this way the ballot has five rankings of each of the parties. In addition, there will be a number of ballots corresponding to local jurisdictions, so it behooves us to show some restraint in adding axes. The bandwidth of both voters and jurgors must be considered an inviolable constraint on the size of the ballot. It is far better to have a short ballot that loses some granularity than a long one that overwhelms decision makers.

3.10 Lifecycle of a Party

We have previously laid out the basic element of a political party's lifecycle: its vote share. At the risk of repeating ourselves, we state again: the success or failure of a political party must depend entirely on its vote share. This alone provides a political party with whatever democratic legitimacy it might enjoy. As a result, we must state explicitly what all resources for political parties are, and rigidly link all of them to the party's vote share.

We have already linked the right to propose legislation to the vote share exactly. Turning to party budgets, funding for all political parties must start with a pool of money sufficient for the operation of all political parties. The division of those funds must be consistent with the order of the vote shares, but not necessarily proportional to vote share. For example, we can allocate half of the pool to each party equally, and half in proportion to vote share. This would help smaller parties that might find themselves unable to conduct full operations if funding were proportional to vote share. In a sense, there is no such thing as a small party in this system, as every party submits proposals at every opportunity, without knowing if its proposal will make it to the jurga. This is a sharp difference with smaller parties in parliamentary systems, which often focus on a narrow subset of issues. Among other things, it means that all parties must have a minimum of resources in order to conduct ordinary operations.

In addition, there can be no factor other than vote share as part of the formula. For example, we cannot allocate more money to older political parties over newer ones. (There will be a single exception to this: new political parties will need start-up resources)

Another resource is office space. While this can be acquired on the open market, there may be a need to ensure that each party has sufficient office space near the main organs of government. In this case, it is imperative to start with a general pool of office space and allocate it so that its value to each party is consistent with vote share order.

The primary right that a political party needs is the right to acquire information for the purpose of writing legislative proposals. These should be equal among the parties, as this is a precondition for crafting policy. This will require political parties to have some employees (and presumably board members) with high level security clearance. This is a sticky issue for democracies, and I don't wish to go down this rabbit hole; however, I view it as a manageable if thorny problem. Also, any information made available to one political party must be made available to all. This does not include information about the internal operations of each party.

We have spoken of parties as having rights. I wish to em-

phasize, however, that parties are not direct stakeholders, they are agents of their voting share. The true holder of the right is the voting public through their equal right to propose. For example, if one party is denied information that is made available to other parties, the violation is that the effective proposing power of that party is reduced, which is an affront to isegoria. The party as a corporate entity has not been harmed in any way.

Number of Parties

We wish to send five choices to each jurga for most legislative purposes. Some proposals have a "no change" option, which means only four parties will be selected to advance options; other proposals have no such option, so five parties will be selected. This means we need at least six parties to enforce proportional isegoria, preferably more. I will settle on eight parties. This means that voters will be expected to rank all eight parties in order of preference. This is at the high end of what ordinary voters can be expected to do without being called for a jurga. Perhaps it would be better to reduce the number of options available to the jurga in order to present voters with a more manageable list of parties. For now, however, I settle on eight political parties as a matter of convenience. The exact number is not critical to the discussion.

Party Death

We have a natural ranking for the parties, namely the vote share. This leads to an obvious mechanism to kill off a political party: periodically kill off the one in last place. This mechanism bears a close resemblance to relegation and promotion, which is used by most sports leagues outside of the United States. In any league, the lowest performing teams are replaced by the highest performing teams from the next lower division. In this case, we have no lower league, so we will need a mechanism to create a new party. I address this problem below.

It may seem strange to find a useful governing method from a source like professional sports. Certainly we are not suggesting that political theorists should suddenly care who

wins the Champions League. We can, however, note what sports leagues have accomplished, and how many of the challenges that sports leagues deal with successfully are the very same challenges that political systems face. Sports leagues are monopolies, yet they are composed of self-contained, quasi-independent organizations (teams) that compete intensely within the monopoly structure. That competition is highly constrained by rules to achieve a desired result, namely to entertain fans. From time to time those rules are modified when the league feels that changes would enhance its value. In leagues that feature relegation and promotion, teams can and often do face the loss of their mandate to continue in the league. In the English Premier League, for example, only eight of twenty teams have been in the league for the entire twenty-seven seasons of its existence.

We kill off the last place party every voting cycle. This is the only sense in which a voting cycle has a beginning and an end; otherwise it is merely a duration of time that determines how often each cohort votes. There are of course other ways to eliminate one party. I describe another method in appendix A.1 that bears some resemblance to the ancient practice of ostracism.

The use of political parties (in the form of proposing agencies) in jurga democracy raises the possiblity of a self-replicating political elite. There is no doubt that jurga democracy creates a political elite; I do not hide that fact. Political elites will exist in any system, and systems that pretend to eliminate such an elite are all the more dangerous, because denying its existence makes the political elite less accountable. Whether or not the political elite is self-replicating is another matter. This feature can and should be controlled for democratic purposes. Indeed, liberal democracy can be seen as a first attempt to tie the continuity of the political elite to the population at large.

Party death is the feature that determines how quickly "new blood" is introduced into the political elite. As described above, one of eight political parties is replaced every two years. If this pace is too slow, the frequency can be increased to one party per year, or any other rate desired by the jurga. I discuss how this is done in section 6.6. But either

of these rates represents a significant acceleration compared to historical norms. In the U.S., the Democratic party dates to 1828, and the Republican party dates to 1854. In the U.K., the Conservative party traces its origin to at least 1834. The Labor party is the baby of the bunch, having been formed in 1900 from the trade union movement.

Party Birth

We know when the lowest ranked party will be removed from the ballot, even though we do not know in advance which party that will be. As a result, we can constitute the new party well before the old party is removed. The only essential choice to be made is who should form the governing board for the new party. This is the only place we see any use for a signature gathering operation. Since creating a party is a precondition for proportional isegoria, we must use a more direct form of isegoria to create a new party. Allowing existing parties to propose a new board to a jurga seems too much like self-dealing. As usual, however, the number of signatures gathered should be treated as a weight in random selection, rather than as a winner-take-all score.

Members of the board are not exercising isegoria in any way, they are merely the governors of an entity whose purpose is to offer voters options in their (the voters') exercise of isegoria. Nevertheless, out of concern that isegoria could be subverted in practice by disqualifying potential board members for corrupt purposes, the only qualifications for board membership are exactly the qualifications for being a voter. In addition, we add a term limit: no person can serve more than one ten year term as a party board member.

The qualifications for being a voter are simply being a citizen who has attained a minimum age. We have no other requirement. Voting rights cannot be removed from a citizen for any reason. This means, for example, that a mass murderer incarcerated for life will still vote from prison, and serve on jurgas too. We do not claim that such a person "deserves" to vote. Rather, state legitimacy derives from isegoria and isonomia. The state can have no discretionary authority over the franchise. Voters choose their government, not the other way

around.

New parties will require some start-up funding. This is the only exception to the rule that resources distributed to parties must be ordered by vote share.

Internal Party Governance

I have said nothing about internal party governance, other than it has a board of perhaps ten to twenty members serving ten year terms, with new members chosen by the existing board. Indeed I have little to say on this topic. It is entirely possible that a party board may become dysfunctional. But there are eight parties, and by design they are captive to their vote share in every substantive way. The remedy is age old: vote the bums out.

3.11 Administrative Divisions

When discussing administrative divisions of a state, I will assume that the entire territory of the country is partitioned at three levels:

1. *State* - A single administrative division containing the entire country.

2. *Provincial* - Multiple large administrative divisions that partition the country, the population of each of which is within an order of magnitude of uniformity among all provinces.

3. *Local* - Multiple smaller administrative divisions that partition each province. The population of local jurisdictions can vary widely, from large cities containing millions, to rural areas with only a few thousand.

Extending jurga democracy to the administrative divisions within a state is relatively straightforward: Just reproduce the system of proposing agencies, and call the jurga from residents of the division, rather than the state as a whole. This is certainly one way to do it, but there are other ways, and there

are a few issues of sovereignty and jurisdiction that must be addressed.

First, I reject the idea of dual sovereignty: the notion that administrative divisions can exercise core government functions under native authority, rather than under authority delegated to it by the nation. Perhaps dual sovereignty played an important role in bridging certain political divides that would otherwise have been intractable. Perhaps the United States would never have come to exist as a single country had not the framers of the constitution included this strange doctrine. Whatever its historical roots, it has proved disastrous in practice, a flaw compounded by the fact that it is unalterable except by revolution.

Rejecting dual sovereignty means that any law passed by an administrative division must derive its authority from a grant at the national level. There are no constitutional proposals at the provincial level, only statutory proposals made pursuant to a national law. Returning to the minimum wage example, such a law could set a floor on the minimum wage nationally, but provide local jurgas the power to set a higher minimum wage.

We have reproduced the entire structure of the legislative service at the local level, but some jurisdictions are too small to support that. Another possibility is compose the jurga at the local level, but use the proposing agencies from the provincial or national level. This reflects the fact that the jurga scales down better than the proposing service does. The vote share of each party would reflect that locality's preferences. Thus every proposing agency would have a weight associated with each administrative division, as well as a top level score. While not ideal, it only violates democratic principle if we maintain dual sovereignty, a doctrine we have specifically rejected.

Chapter 4

Jurga Deliberations

I have discussed the conditions that must be met in order for a jurga to be convened, so now attention must shift to how the jurga should actually deliberate. This chapter is guided by James Surowiecki's 2005 book *The Wisdom of Crowds*[2], which provides an excellent framework for evaluating the epistemic quality of group deliberation. In addition, the DPP provides some important insights into group deliberation specifically on matters of public policy.

4.1 Criteria for Wise Crowds

Surowiecki establishes three main criteria for the deliberation of wise crowds:

1. *diversity* - Each person should have private information even if it's just an eccentric interpretation of the known facts.
2. *independence* - People's opinions aren't determined by the opinions of those around them.
3. *decentralization* - People are able to specialize and draw on local knowledge.

I will look at each one of these in turn.

[2]James Surowiecki. *The Wisdom of Crowds*. Anchor, 2005. ISBN: 0385721706.

Diversity

This is easy. The jurga selection process guarantees diversity on almost any meaningful axis. Random selection, mandatory service, and sufficiently large group size provide the best possible conditions for a diverse deliberative body.

Independence

Independence requires an uncoerced deliberation model. By "uncoerced" I mean that jurgors are not required to engage with their fellow jurgors in a manipulative psychosocial dynamic in order to successfully discharge their duties. Juries, for example, are required to achieve unanimity in order to reach a verdict.[1] This means that a juror who disagrees with all the other jurors will be subject to all manner of harangue in order to get to a verdict. Judges will even force a jury to return to its chamber in order to further bludgeon the lone holdout. Subjecting jurors to such practices is not only cruel, it harms the epistemic quality of the output. If 11 jurors feel the defendant is guilty and one feels he is innocent, why on earth should that be considered a mistrial? That's not a failure, that's the outcome.

A better solution would be simply to take the 11 to 1 result as a valid verdict and change the interpretation. We could take any non-unanimous result above 9 to 3 as a partial conviction, meaning that the presumption of innocence is reversed, but the defendant has an automatic right to a new trial. Or we could just take it as a conviction with uncertainty, and subject the defendant to a reduced sentence. Non-determinism of this sort is not very satisfying, but it is more just. Forcing groups of people to make absolute pronouncements when they may have some uncertainty both degrades the quality of the result and dehumanizes all involved, from the accused to the jurors themselves.

Uncoerced deliberation, therefore, means that jurgors are relieved of any duty to the group to achieve procedural suc-

[1] There are states in the southern U.S. which do allow conviction with less than unanimity. Unfortunately, these laws are thinly veiled racism, allowing prosecutors to obtain convictions against black defendants with one or two token black jurors. Such policies have no value here.

cess. Procedural success is assured, so long as jurgors cast a final vote.

There should also be limits to how much jurgors can communicate directly with one another, as communication among jurgors can produce "group think". The exact degree of limitation is an empirical matter that should be determined in consultation with social and behavioral scientists. One thing is certain, though: there is no democratic principle involved in limiting contact among jurgors. So long as the rules are applied equally, all limitations on contact are consistent with isonomia. If experience shows that a total ban on communication among jurgors is optimal, then such a ban should be implemented, with no insult to democracy.

Decentralization

As with diversity, much of this criterion comes from the jurga selection process itself. I restrict the information available to jurgors by requiring that materials be submitted in advance of jurga selection. This is done to prevent information from being tailored to specific individuals. In addition, a wide variety of general purpose information should be available to the jurga—encyclopedic information, government statistics, etc. The only requirement is, again, that these materials be presented as they existed prior to jurga selection.

With such a wide array of information, no jurgor can possibly review even a significant fraction of what is available. As a result, each jurgor will look at only the information that is relevant to him or her. Each jurgor will deliberate in a highly idiosyncratic way, with information that is unique, at least in the sense that no other jurgor is looking at those particular data.

4.2 Jurga Support Staff

The DPP has shown beyond doubt that ordinary citizens are capable of grappling with complex policy questions. But it also provides people with considerable support in terms of finding and aggregating information for them to consider. This is an essential function, as governing a large society is

inherently complex, and even highly educated jurgors will get lost without some assistance.

Providing that assistance presents a number of challenges. The most obvious is the ancient question, "quis custodiet ipsos custodes?" or, "who guards the guardians?". To answer this, I will go through a few possibilities and examine their flaws, ultimately arriving at the best solution.

One Support Agency

The most obvious solution is a single support agency. It would be able to search existing data source for answers to particular questions, call witnesses, and other research functions.

This structure is obviously problematic. As a monopoly, the agency can pursue its own interests without fear of losing influence. It can provide the jurga with biased, unreliable, or even outright false data. Any law to the contrary would be difficult to enforce to say the least. Also, because there is only one, it would be almost impossible to simply get rid of it and replace it with a new one, no matter how corrupt it became. No one is guarding the guardian in this case.

Multiple Support Agencies

In this case I imagine three separate support agencies, all with the same mandate. When a jurga meets, each of the three agencies works with the jurga in succession, with the order chosen randomly.

This has a number of advantages. Jurgors can get multiple answers to similar questions from different agencies, making it harder for any one agency to supply bad information without consequence. Even assuming good faith by all three agencies, there will be discrepancies in the answers jurgors get. This kind of intellectual pluralism may be frustrating to the jurgors themselves, but it is likely to improve the epistemic quality of the outcome.

With three agencies, it is possible to replace one without taking the entire system down. In theory, this places a limit on how corrupt any one agency can become. Unfortunately, there is no mechanism for agency replacement, so we need to go further.

Support Agencies with Replacement

We now wish to add periodic replacement of poorly performing support agencies. Fortunately, we have all the tools we need from the our discussion of the proposing agencies. Each jurga should have the assistance of three functionally independent support agencies. For the proposing agencies, we wanted to present each jurga with five options, so we needed eight proposing agencies so that we could pare the total in accordance with proportional isegoria. I will follow the same logic here, but with different numbers: there should be five support agencies, each with a score similar to those of the proposing agencies. From these five, three are selected for each jurga, in proportion to each support agency's score.

The support agencies' scores will have a different source than those of the proposing agencies; they will come directly from each jurga. At the end of deliberations, jurgors will produce two votes: 1) the proposal for which the jurga was convened, and 2) a ranking of the support agencies. The ranking will be in answer to a question like, "Which of the support agencies helped you the most in coming to your conclusion? Rank all agencies in order of preference". Only the chosen three agencies will be ranked, so only those three will have their scores updated by any given jurga.

The last option, *support agencies with replacement*, is sufficient. Since it is virtually identical to the method used to capture the proposing agencies, the principles of section 3.6 should apply here as well. This mechanism, which I call *divide and capture*, can be used in a number of different ways. I discuss it briefly in appendix A.2.

4.3 Deliberation with Assistance

The jurga deliberates with the assistance of the support agencies. The process begins once the options for the jurga are set. There follows a period in which the proposing agencies, the support agencies, and outside interest groups can compose materials for submission to the jurga. As before, all the support agencies submit their materials even though only a subset will be selected to assist the jurga.

Once the materials are set and the support agencies have been chosen, the jurgors can be randomly selected and the jurga convened. It is absolutely essential that the materials submission occur before the jurgors are chosen, lest those materials be targeted to the specific composition of the impaneled jurga. These materials are the only prepared materials that jurgors will have access to as they deliberate.

Each of the three chosen support agencies will then have a fixed period of time to assist jurgors in their deliberation. For the sake of argument, let's say this period is one week. During this week, the chosen support agency can assist jurgors in any way they see fit, consistent with all other rules of jurga deliberation. Uniquely, the support agencies can introduce new materials in response to questions made by jurgors. Any material thus produced must be made available to the entire jurga. This does introduce some possibility of information that is targeted to specific people, but it is necessary from an epistemic viewpoint. Only the support agencies can be trusted with this task, as they are captive to the jurga specifically, and have no role in the proposing process. Nevertheless, jurgors should be made aware of the ethical concerns associated with newly produced materials, and should have an avenue for reporting anything they believe to be unethical. Of course, the main mechanism for holding a support agency accountable is the ranking process. There is a diagram showing the activities of a typical jurga in figure A.2

The support agencies become, in effect, the institutional memory of the jurga. We have casually spoken of the jurga as a single entity up to this point, but by itself, each jurga is a separate entity with no connection to any other jurga. The addition of the support agencies now allows us to speak of the deciding service:

Definition 4.3.1. *deciding service* : A service which takes proposals made by political parties and chooses which (if any) are to be implemented, whether those proposals are bills, lists of candidates, or any other form. The service shall consist of two parts: 1) A temporary part called the *jurga*, consisting of randomly chosen citizens for each question, and 2) a permanent part, called the *support service*, which should assist each jurga in its deliberations, and which should be captive to the will of

the jurga in every way practical.

We will continue to speak casually of *the* jurga, by which we mean the definition of the jurga and its use over time, and *a* jurga, a specific instance convened to consider a specific question.

The support agencies are part of the deciding service, but they are not exercising any isonomia rights. Isonomia rights belong only to the electorate, through the jurga. A support agency has the same life cycle and organizational structure as the proposing agencies. The only differences are the source of their scores, and parameters such as the total number of agencies, the number of agencies to be eliminated at any one time, and the frequency of agency death. In practice the support agencies will likely be much smaller than the proposing agencies.

The Legislature

Together, the proposing and support services form the legislative branch of jurga democracy.

Definition 4.3.2. *jurga legislature* : The combination of the proposing and deciding services. Also called the *legislative service*.

4.4 The Jurga Infrastructure

Jurgors are selected at random from the general population. Some people will not be able to serve due to hardship or incapacity, however we wish to minimize the number of such cases and make service as convenient as possible. As a result, jurgors will not be required to change locations. The tools for the task will go to them. For city dwellers, this can be as simple as have a suite of offices available year round; a given jurgor will simply spend the workday in the office nearest their home. Incarcerated citizens must participate no matter their crime. Any criminal penalty that prevents jurga participation is unconstitutional; in particular, capital punishment cannot be used on citizens. Again, isonomia is the precondition for democratic legitimacy, not its result. For

citizens living in more remote locations, resources will have to be moved, for example in the form of a mobile office mounted on a truck. Whatever form it takes, this process should ensure that every citizen chosen can participate. Some boring but necessary considerations for jurga service appear in appendix A.2.

There is no such thing as "conflict of interest" for jurga service. The representational character of the jurga depends on the principle of random sampling, which itself factors in the possibility—even the likelihood—that some members of the jurga will have a material interest in the outcome. Jurgas are representative, not disinterested.

This may seem to run counter to our efforts to remove distortions from the system such as vote trading and vote selling. That is not the case, however. These distortions all occur because a jurgor is handed an asset simply by being selected. Selling a vote is fundamentally different from having a material interest in the outcome due to a preexisting characteristic. Such material interests are part of the population we seek to represent in the jurga. Eliminating jurgors with a material interest would actually be a distortion in itself.

These consideration do, however, suggest an obvious ethical restriction: jurgors should be barred from engaging in significant financial transactions upon being notified of their selection. This ban should last until their service is complete. After jurga service, any transactions a jurgor may undertake are also available to the general population. Again, we are not trying to force the jurgor to act in a *disinterested* manner, only in a *representative* manner.

Example 4.4.1. A jurga is convened to consider a question which will affect a particular company's stock price. A jurgor, sensing an opportunity for profit, chooses the option that would boost the company's stock the most. After service is complete, the option selected is the one this particular jurgor favored. The jurgor then purchases some of the company's stock.

While this example may seem unethical, it is consistent with jurga service so long as the purchase is made *after* the results are finalized and published. The jurgor's actions are

representative in that he is taking an action that any member of the public could take. If the stock purchase is made *before* the results are published, however, the action should be considered a criminal violation. The jurgor in that case is taking advantage of the mere fact that he has been selected to serve on the jurga, and hence his action is a corruption of his representative mandate.

Note that, in practice, it will be hard for jurgors to engage in such transactions with any certainty. Restrictions on jurgor communication mean each jurgor will have very little insight into what the final result will be.

It can reasonably be objected that we have eliminated the portion of the population that would have purchased the stock if not selected for service. Unfortunately, we have no reliable way to determine if a jurgor would have purchased the stock during the jurga service period.

This raises another analogy to physics. There is a natural limit to the ability of the jurga to measure the considered views of the underlying population. Selection to the jurga is a characteristic of jurgors, and hence in at least one way the jurga can never be representative. This is similar to uncertainty principles in physics. We choose to outlaw certain financial transactions because we feel that the cost of allowing such temptations is the greater concern. We readily acknowledge that there is a representational price to be paid for this choice.

Principled Nonparticipation

Jurga service consists of two theoretical components: representation and participation. Representation is the state's responsibility: The state selects jurgors at random, establishes the conditions of jurga service, supplies the necessary tools and services, etc. Participation is up to the jurgor, and consists of putting forth minimum effort to conduct the needed research, and casting a valid vote.

All compensation jurgors receive is for participation. Thus, refusing to participate is not illegal, but it does result in forfeiture of pay. Also, a jurgor who refuses to participate will not be allowed to work outside of jurga service for the duration of the jurga, though her job will still be protected. Essentially,

a jurgor who refuses to participate should have all of the requirements but none of the benefits of an ordinary jurgor.

Any vote cast in a valid manner by a jurgor must be counted, even if the jurgor did not meet her minimum duty to participate in deliberations. Such a jurgor should have their pay clawed back through a civil *contempt of jurga* hearing, but the vote is still valid. The state must have no discretion over which votes to count.

Any jurgor who refuses to cast a ballot must automatically be found in (civil) contempt of jurga and have her pay docked. Principled non-participation is a representative action, but the state requires participation to pay a salary.

Nonpublic Information

Jurgors may want access to some nonpublic information to come to a decision. This presents any number of problems, as the nature of nonpublic information is quite varied, from data about candidates that might merely be private, to national security secrets whose exposure could alter the course of history.

There is one unalterable principle here: All jurgors must have access to the same body of information. We also have a nearly absolute principle that anyone chosen must serve, without any discretionary selection whatsoever. This leads inevitably to the conclusion that any information used in jurga deliberation must be public.

While the jurga cannot access nonpublic information, the support agencies can. One of the principle competencies of the support agencies will be to take questions from jurgors about nonpublic information and summarize it in ways that are appropriate for public release. Clearly, the support agencies will need staff members with high level security clearances.

The support agencies should also have the power to petition government agencies to have information declassified. Western democracies—particularly the U.S.—have a persistent over-classification problem. As information becomes relevent to jurga deliberations, it should be routinely declassified unless there is a compelling reason to keep it secret. The support agencies, working in concert, should have the right to declassify information without further approval.

For example, we can automatically declassify any material that three or more of the support agencies certify is safe for the general public.

When it comes to the employment records of candidates for office, we err on the side of disclosure. Public officials should only seek office with the understanding that their previous employment will be an open book.

Jurga Tampering

The conditions under which the jurga deliberates are meant to be controlled. We have already set some limits here: in particular, all prepared materials must be submitted prior to both jurga selection and the appointment of support agencies. Support agencies can supply new material in response to questions, but should not advance new material proactively.

Any attempt to influence specific jurgors in a corrupt manner (jurga tampering) should be considered a criminal offense. There is no legal or constitutional objection to sequestering the jurga; nevertheless, it should not be common practice. While deliberating, jurgors should only have access to the support agencies and to the materials that were officially submitted, not to outside information such as social media, mass media, etc. When a jurgor goes home for the night, he or she will have access to these things, but should be instructed to avoid them. Similar to a jury, a jurga should only be sequestered if there is a substantiated concern about jurga tampering or contamination, and then only under court order.

The only reason to nullify the result of a jurga is if the final count is not a reflection of the votes cast. For example, a result could be discarded if malicious software is found that simply replaced the votes of the jurgors with fictitious votes. Jurga tampering is not such a reason. Anyone involved in the tampering—including jurgors—can be prosecuted, but the vote is still valid. No jurgor, once selected, can be disqualified from voting for any reason other than incapacity. We want the smallest possible surface area for discounting a jurga outcome, even at the cost of some corrupt votes.

4.5 Aggregation

I have been deliberately vague on aggregation up to this point. Getting this topic right is of fundamental importance to the legitimacy of the jurga, both perceived and actual. Nevertheless, the topic is a technical one, better suited to a math textbook than a manifesto. Rather than treating the topic in full, I will go through aggregation from a heuristic point of view; I will not address the actual formulas to be used. No method is perfect, but many methods are quite good.

Legislative Jurgas When passing a law, the aggregation task is straightforward: find the most preferred option from among a list of bills. Jurgors should rank all of the options in order of preference, and the top option should be computed using a Condorcet method. The best aggregation formula at present appears to be the Schulze method.

Personnel Jurgas When rating people to become government officers of any sort, jurgors perform a simple ranking of all candidates, similar to what they do in legislative jurgas. The output is different, however: each candidate must receive a numerical weight, which can then be used in a random selection process. This additional calculation should always be consistent with a fully ordered Condorcet method such as the Schulze method. There are any number of ways to do this; finding the best way is out of scope for this project.

Aggregation for Proposing and Support Agencies Creating scores for these agencies has two components: 1) generating a score at a particular time, from a particular group, and 2) blending that score with the agency's existing score. If we follow the "cohort" method outlined in section 3.9, then we simply combine all votes from the rolling election window, which for us is forty-eight cohorts. If we follow election by grand jurga, then we must blend scores using another method, such as a moving average.

For the support agencies, we will have to use a method like a moving average, since we have no predefined cycle of cohorts. In addition, the calculation will only involve the sup-

port agencies that have been selected to assist a particular jurga. The other agencies' scores will remain the same.

Previously, we laid down the principle that the rules governing jurga deliberations cannot be altered based on the topic of the jurga. This only applies to *discretionary* changes, however. For example, we cannot have any person in the government deciding to decrease the size of a particular jurga because he thinks the topic is not controversial.

The system does allow for multiple flavors of jurga, so long as these flavors are defined either in law or in the constitution. For example, a bill might require a jurga of 300 people to decide annually on some set of parameters, but one of 500 people for its "amend and improve" jurga. This is acceptable as long as there is no discretionary component in determining the jurga flavor.

There are a great many possible flavors that would comply with isonomia; I go through a few possibilities in appendix A.2.

Chapter 5

The Executive Branch

We wish to construct a system for the executive branch centered on the same building blocks as the legislative, namely proportional isegoria and the jurga. In many ways this is an easier task. The executive branch is made up primarily of discrete corporate bodies, most of whose employees are permanent. Only the principal officers of these bodies are considered political appointees. Since appointing these officers constitutes the bulk of the executive's political aspect, this should be much easier than crafting legislation, which is an inherently unstructured task.

5.1 The Unitary Executive

Before building our system, however, we must deal with the most enduring feature of executive governance: unity of command. Both prime ministers and presidents have stubbornly retained and augmented the powers of their offices, in particular their ability to control personnel and policy in every corner of the executive branch. The most notable exception is monetary policy. Even here, though, the independence enjoyed by central bankers is often customary rather than legal.

This condition is much older than modern democracy. It reflects the logic of absolute monarchy, and is therefore historically entangled with the personal prerogatives of the monarch, rather than the functional needs of governance. Re-

markably, far from delegitimizing the unitary executive, the theory of representative government has enabled it. Offices like the president of the United States and the prime minister of the United Kingdom did not start out as representative. The electoral college was simply a mechanism for selecting an individual to serve in the role of president, and was expressly devised to separate the office from being directly representative. The prime minister originally served the Monarch. Now these offices are viewed through a representative lens, partially owing to the fact that they are chosen by election (even if indirectly), and partially through the efforts the office holders themselves, who have been eager to claim a democratic mandate.

5.2 The Executive Authority

The first and most obvious change is to remove the power of appointment given to the apex officer of the executive. This is necessary but not sufficient, as removing the power of appointment does not fundamentally change the grant of agency. The chief executive still has ultimate decision making authority throughout the hierarchy. This absolute power must be severely pruned if we are to avoid autocracy, and create an executive branch that is both representative and functional.

Fortunately, there is a natural fix. The model of authority described above is deep authority. The apex authority extends to all branches and leaves at any level of the tree. We replace this notion with shallow authority, in which any node of the tree has authority only over its immediate descendants.

At first, this may seem to accomplish little. The chief executive may not have direct control over distant branches, but he can order those directly below him to intervene through the chain of command. To prevent this, we introduce the notion of executive scope. Consider each leaf of the executive authority tree—a leaf being an office with no child offices. Each leaf would have a predefined scope. For example, a leaf office in the area of environmental regulation might have scope over a specific territory. For any issue affecting environmental regulation in that territory alone, the occupant of that office would have full authority to act. Even the office immediately supe-

rior would have no authority to alter decisions of the leaf office if the issue fits entirely within the scope of the leaf office.

Branch offices—offices with child offices—would exist for two purposes:

1. to harmonize policy across its child offices

2. to lead projects that cut across multiple child offices

To continue the previous example, suppose an environmental issue arises that spans multiple territories. In that case, authority over that issue would go to the lowest office on the executive authority tree that fully encompassed the issue at hand. Even so, implementation would be done by the leaf offices. The branch office would only control the policy to the extent needed for coordination across territories. I call a hierarchy set up this way a coordination hierarchy, as opposed to a command hierarchy.

This is, in fact, the way most functioning democracies operate in practice. By custom and culture, even low-level political appointees have real authority within the scope of their offices. But this is not constitutionally the case. This is a serious problem: we trust that a good chief executive will honor the authority of lower level offices, while leaving the door wide open for a bad chief executive to ignore this principle with impunity. In order to shut this door, we formulate the following principles of a coordination hierarchy:

Definition 5.2.1. *coordination hierarchy* : A set of offices organized in a tree structure with the following properties:

1. The hierarchy consists of a single tree with an apex office.

2. Each leaf office has a well defined policy scope.

3. Each leaf office is fully empowered to act within its defined scope without interference from any other part of the hierarchy, including superior offices.

4. The scope of each branch office is any issue that falls entirely within the collective scopes of its direct child offices and cuts across at least two of those offices.

5. A branch office is empowered to issue binding orders to its direct child offices on matters within its scope; however, implementation is left to each child office.

6. A branch office is empowered to issue binding executive policy statements to harmonize policy across its child offices. Such statements must apply to all child offices, and cannot have even the effect of singling out specific child offices.

7. Officers are chosen by a process exogenous to the hierarchy, and cannot be removed by any other officer. Any and all decisions about the term of office and appointment to or removal from office must be exogenous to the hierarchy.

The fundamental idea here is that branch offices have no native portfolio, their only portfolio is to coordinate activity among lower branches and leaves. This feature is absolutely critical to breaking up the unitary executive. If we allow branch offices to have their own native portfolios, over time the inevitable centralizing tendency of political systems will create a command hierarchy, at least in practice.

A coordination hierarchy in government is called an authority:

Definition 5.2.2. *authority* : A coordination hierarchy that is an organ of government and whose office holders are determined politically.

With these definitions we can now chop up the executive grant of agency at a constitutional level. We state, constitutionally, that the operational portion of the executive branch shall consist of an authority, and that each office in that authority shall have a duty to act independently, consistent with its scope, and with the principles above.

The observant reader will notice that we have said nothing about the internal structure of each office. Consistent with current practice, each office might have a single officer assigned to carry out its duties. But this is not a requirement. If we were deeply paranoid about the possible misuse of an office by a single individual, we could require each office to be held by three

people at a time. Every day, one of the three would be selected at random to execute the duties of the office for that day. However contrived this example may be, it illustrates the fact that offices need not be personal in any way. At some point in the future, an office might even be held by an AI bot. This is perfectly acceptable, as long as the AI bot is selected through the principles of isegoria and isonomia. A more common usage would be to structure an office as a committee. Committees often have incomplete agency, but they can be effective if they are defined properly.

5.3 The Oversight Authority

We have split the executive into a large number of independent offices, organized into a coordination hierarchy. This is a necessary precondition for applying isegoria and isonomia to the executive branch. While a single person cannot claim to be representative, the entire body of executive officeholders can, at least to some limited degree. Nevertheless, the introduction of so many independent offices generates a large surface area for disputes among offices. Ultimately, the judicial branch will decide the most disputed cases, but I add a layer within the executive branch, which I call the oversight authority. This role is similar to the oversight role in the legislature, and the structure of the hierarchy will be roughly similar to the committee oversight structure. As with the executive authority, I require the oversight authority to be a coordination hierarchy. A diagram of how the oversight authority should function appears in figure A.3.

Much like the system of legislative committees and subcommittees, the policy oversight tree should be much smaller than the executive authority. Also, it need not respect the lines set out by the executive authority. It has two basic functions:

1. It is the first authority for resolving scoping disputes among offices in the executive authority. Disputes can still be taken to the judiciary, but the decisions of the oversight authority should be respected unless there is a clear legal reason to the contrary.

2. It has the power to issue policy opinions, which are decisions issued to interpret and clarify the law. Policy opinions are inferior to any law, but superior to any statement or order made by the executive authority.

Policy opinions operate at the edge of what is permissible under isegoria and isonomia, but they are necessary in practice. To curtail the power of policy opinions, I limit the duration of their validity to the length of the election cycle.

Each office in the oversight authority will have investigative power over its scope, including subpoena power and other compulsory investigative tools. However, its mission relates only to policy. If in the course of an inquiry an office finds evidence of garden variety malfeasance (fraud, embezzlement, etc.) it should refer the matter to the appropriate law enforcement and government ethics bodies.

The oversight role is one which must be structurally separate from the operational. As a result, the oversight authority cannot be modified by any normal proposal, either constitutional or statutory. Instead, a special jurga will be called once every election cycle to consider changes to the oversight authority.

Given the nature of the oversight authority, it may make sense to structure its offices as committees rather than offices with a single officer. As always, care must be taken to ensure that an office defined as a committee has the necessary agency to accomplish its task. The rules of committee operation should be defined in law, not left to committee members.

Conflict Resolution

It is a remarkable failing of modern democracy that the command hierarchy is unchallenged as the default structure for the entire executive branch. The costs of this failing are enormous. Policies in every area of government swing wildly between extremes whenever there a new government. In addition, since there is no randomization to political appointments, the chosen appointee is often the worst possible candidate.

Consider the Administrator of the Environmental Protection Agency (EPA) in the United States. As of November 2019, this office was occupied by Andrew Wheeler, formerly

the chief lobbyist for one of the most polluting coal mining companies in the world. He is literally the worst possible person who could be chosen from the point of view of the agency's stated mission. This is by no means an isolated case. Examples abound of people appointed precisely to subvert the stated purpose of their office.

This points to a remarkable relationship: an oligarchy of interests is a kakistocracy (rule of the worst). This is in line with Adam Smith's famous observation:

> People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.

The more a given industry's interests contradict with the general good, the greater their incentive to engage in such a conspiracy. The current structure of the executive aids and abets this process.

The default position of current governments is to concentrate executive power, then hope that institutions exogenous to the constitutional order will maintain the functional independence of the executive's many parts. Amorphous forces like "civil society", "the press", "political culture", and "bipartisanship" are invoked to assure us that our absolutist executive really works. But all of these forces cut against the system, rather than work within it. Even if they succeed in limiting the excesses of our winner-take-all executive, they should be viewed not as a part of the system, but as backstops that are saving us from the system's endemic flaws.

By reversing this default, we open up a world of possibilities. For one, the executive can now be representative in a way that can never be the case in a winner-take-all system. No single executive office can be representative, even one occupied by a committee rather than an individual. A single office is all agency. But as a collection, all the offices together can have at least a limited claim to representation, if the total amount of executive authority is divided in a roughly proportional manner based on the equal proposing and deciding rights of all citizens.

However, there is a price to be paid. Since each office has

an independent grant of agency, the chance of conflict among offices grows dramatically. We require a much greater investment in conflict resolution. We have already introduced the oversight authority. In addition, there should be a separate channel within the judiciary to resolve such conflicts in an expedited manner.

This extra overhead may seem like an avoidable cost. But it is also possible to see the lack of structure for handling such conflicts as a serious flaw. Conflicts of this kind are natural and healthy in any large enterprise. Government is an enterprise where representative principle is essential. Suppressing these conflicts with a command hierarchy fundamentally calls into question the legitimacy of the executive branch.

5.4 Executive Pooling

We have introduced a more granular structure to our executive branch, and now we will reap the rewards as we populate its many offices. We first reflect for a moment on the purpose of political appointees: to translate policy as enacted by law into action. This is different from the mission of a subject matter expert in the civil service. Subject matter experts focus on solving concrete problems that are given to them by policy makers. As such, it is not necessary or even desirable for political offices to be filled by subject matter experts.

What we are instead looking for is educated generalists, smart enough to work with experts but focused on the big picture. We can therefore treat the candidates for political office as a pool, nominated by the political parties through proportional isegoria, and confirmed by the jurga. Their confirmation is not for any particular office, but rather for general fitness for the political service. This service takes on some of the characteristics of the civil service, as political mercenaries are replaced by professionals.

Pooled Selection

All nominees for political office will be nominated by the proposing agencies in accordance with proportional isegoria, and confirmed by a jurga in accordance with isonomia. Since

service is pooled, proportionality is trivial. Political positions are vacated regularly in significant numbers, so nominees are put forward in groups of 50 or more. Each proposing agency simply gets its share of the nominations for submission to the jurga.

There are a number of mechanisms by which nomination and confirmation can occur. I lay out these mechanisms here, so that when we get to the specifics of the executive and the judiciary, we can choose mechanisms from the menu.

Representative vs Merit Scoring

When confirming or rejecting candidates for office, the jurga will rank office seekers in order, producing a score for each. How this score is interpreted is vital to both effective governance and public perception of institutional legitimacy. There are two basic ways to interpret a candidates score:

1. as a representative score; that is, as a reflection of that candidate's support in the population, and

2. as a merit score; that is, as a reflection of that candidate's quality.

Instrumentally, a representative score should be interpreted as a probability, and final confirmation should be done randomly in proportion to those probabilities, whereas merit should be interpreted as a rank, and the candidate confirmed for a given office should be whoever has the highest score.

In this context, we do not define representation or merit as it applies to candidates. We do not care about the *content* of these concepts, only the procedures that select for them. Merit is simply the idea that some candidates are better than others, whereas representation is the notion that candidates should be selected in proportion to popular support. What constitutes merit or representation in practice will be determined by the jurga, which is a black box for our purposes.

One of the great failings of contemporary democracy is that all candidates are chosen according to the merit interpretation. This is true both in "first-past-the-post" voting and forms of ranked selection such as Condorcet methods. These leads to

a governing class that is deeply out of touch with large segments of the population, and which, while often professional, is perceived as illegitimate.

The only purely representative selection mechanism would be random selection from the general population. But any reasonable person must acknowledge that such a system is wholly inadequate to the needs of a modern state. Even simple societies need some level of professionalism in public offices. In appendex A.3, I lay out some simple selection rules that will allow us to mix representation and merit in confirming candidates for office.

Nomination and Confirmation

Nominating candidates for a pool is relatively simple. First, we note that the term of each office should be defined in law. We will assume that all offices have a term of two years, which is the length of our election cycle. This is just a simplifying assumption; actual terms will vary. We also assume that the starting and ending dates of the terms are staggered to make the executive branch as continuous as possible.

We will also assume three seniority levels within the political service: junior, senior, and leadership. The sizes of these groups will be roughly logarithmic in scale. For example, there might be 20 leadership (cabinet level) positions, 150 senior positions, and 1000 junior positions. Each level will be handled independently for both nominations and confirmations.

Since we are treating each executive level as a pool, we allocate nominations in proportion to vote share. At fixed intervals, parties will be called upon to nominate a certain number of candidates for eligibility to assume executive office. For example, if it is anticipated that fifty senior positions will come open in the six months, the parties will nominate 100 candidates, each party nominating a number in proportion to their vote share. These candidates will go to a jurga, who will rank the candidates. Each candidate will receive a numerical weight reflecting the degree of favor he or she has earned from the jurga. As offices are vacated, a candidate for that office will be chosen at random, according to the weights

given by the jurga. In this example we have used proportional confirmation, but any combination of methods from section A.3 will meet the requirements of isonomia.

The choice of confirmation mechanism is ultimately about obtaining the best results; however, I will not hide my preference for proportional confirmation. If we accept only the top candidates according to weight, we will inadvertently reproduce a "winner-take-all" features of contemporary democracy. Factionalism is not just a feature of political systems. Societies have natural fissures of race, ethnicity, religion, tribe, and gender, among others. Jurgas will reflect these, and if only the "best" are chosen, this may mean that large factions will dominate disproportionately to their numbers.

Traditional notions of merit should undoubtedly be part of the jurga's deliberations. But they should not be the only consideration. This is another example of an uncertainty buffer to prevent government institutions from being captured. It not only makes the executive more descriptively representative, it changes the nature of the nomination process. When we choose only the "best", the nomination process is about clearing a threshold, which has a homogenizing effect. Under a proportional confirmation system, parties have much more freedom to put forward candidates of greater diversity, however that term is understood.

If in practice it is found that truly unqualified candidates are repeatedly selected for office, then a hybrid score that eliminates the lowest scoring candidates should be used. Our primary concern here is filtering out the worst, rather than selecting the best. The costs associated with incompetent and corrupt leadership are greater than the benefits of outstanding leadership, and preserving as much of the representative aspect of the score is essential for democratic legitimacy.

I also require that any person nominated for a senior office have completed three full terms in junior office, and similarly that any person nominated for a leadership office have completed three full terms in senior office. This guarantees that the highest offices in the land will have officeholders who have run the jurga gauntlet at least seven times. This is one reason to keep terms of office short. With two year terms, a person could theoretically make it to a leadership position in twelve years.

This would put such a person in her mid-thirties. While the minimum time is unlikely, it should be routine to have leadership officeholders in their mid-forties. A longer term of office means either that leadership posts cannot be reached until the fifties or later, or that the number of required terms will have to be reduced. I prefer to have candidates screened by the jurga as many times as possible.

5.5 The Political Service

The executive in our system is both remarkably similar to the status quo and strikingly different in important ways. The overall structure looks about the same: the organizational chart of political offices need not change much. But all the defaults have been reversed. This comes into play most prominently in times of stress. The current system reverts to autocracy, in which dissenting voices in the lower branches of government get overridden or purged. With a pooled system and a coordination hierarchy, the system reverts to pluralism, along with a robust conflict resolution mechanism.

This should foster a different culture among political officeholders. The career path of a member of the political service depends on winning the favor of a party and of the jurga. This is appropriate since these are the mechanisms through which isegoria and isonomia are exercised. The candidates for these offices can come from anywhere, but there is a need to develop a reserve of potential office holders. The political parties are the natural place to build this reserve, as they already have a significant need for personnel with policy expertise. I therefore treat the policy employees of the proposing agencies as members of the same political service. Each party would be allocated a number of such positions, consistent with their vote share. These positions would officially have the same rights and obligations as members of the political service who are employed in government, except that they would be allowed to act on behalf of their party, whereas government positions would be officially nonpartisan.

I anticipate that the total size of the policy service would be between two and four times the size of the policy service in government. For example, if there are 1000 political

appointees in government, there would be between 1000 and 3000 members of the political service working for the proposing and support agencies. This is a significant reserve, and it illustrates the fact that good policy making requires a lot of policy work that never gets enacted. I refer to this as virtual policy. Again there is a strong analogy to quantum systems. In quantum systems, there are a large number of possible states that can never be observed, and yet must be accounted for due to the mere possibility that they will influence the observed outcome. This accounts for the tremendous informational capacity of quantum systems, and the addition of such informational capacity to our politics is sorely needed.

Our political system now suffers from a major deficit of meaningful virtual policy. I say meaningful, because there is actually a lot of potential policy ideas thrown around. But due to the structure of contemporary democracy, most of this policy has no chance of ever passing. At the same time, a few highly influential organizations end up with a disproportionate influence on policy, and they often work in secret. The game is effectively rigged, so that the entire system of think tanks and advocacy groups making policy proposals do not impact the system in proportion to how favorably their policies are viewed by the general public, but rather by how connected they are to the ruling coalition at any given time.

In our system, every party writes a proposal for every jurga. Each of these proposals must be published before the jurga is even selected. This provides a huge base of virtual policy, all under the democratic umbrella of proportional isegoria.

The Political Service as a Society in Miniature

The policy service has a size in the low thousands. This is on the same order of magnitude as the body politic of greek city states. The policy service thus reproduces many of the same properties of these small polities. In particular, each member has a reasonable expectation that they may either oversee or be overseen by any other member over the course of a career.

I view the fact that the political service becomes a minisociety as a virtue. Indeed, the breakdown of many western

democracies has been heralded by a breakdown in elite political culture. There is, of course, a strong undercurrent of hostility to the very idea of a political elite. But attempts to eliminate political elites as a class have, if anything, only made systems more autocratic. Revolutions of both Marxist and authoritarian flavor have declared their hatred for political elites, only to form a new elite of their own. In keeping with our philosophy throughout, we institutionalize the elite in order to capture it. If nothing else, a professional political class is needed to write policy and train government officers. There is nothing wrong with a political elite, so long as its fortunes are anchored as much as possible to isegoria and isonoma.

Since we are creating a mini-society, it is incumbent on us to examine what life will be like for its members. In particular, what types of stresses will they be under? What will their career arcs look like? What kinds of people will be attracted to join?

Nonspecialization

The most obvious change is the fact that members of the political service do not know what job they will be assigned, or even if they will receive an assignment. This uncertainty is an epistemic virtue, since it reinforces the idea that the officeholder is there to serve the public, not their own interests. It also serves to address the revolving door between lobbyists as public officials. In order for a lobbyist in a given industry (say the coal industry, in keeping with our previous example) to get a desirable position, he would have to get extremely lucky, as the random selection process is overwhelmingly likely to assign him a job outside the coal industry. Seeking a particular office is not likely to work.

In order to prevent backdoor office seeking, we require that candidates sign an agreement ahead of time committing to accept whatever position is assigned. Any person who refuses, or who withdraws from consideration for any reason after signing the agreement, would be barred from jurga confirmed positions for a set period of time, for example one election cycles (two years for us). Quitting an office without serving a full term would draw the same penalty. We want

office holders to serve the public good. We have no way of enforcing this directly, but we can enforce it indirectly: we can remove any path for an office holder to serve another agenda whenever we find it.

We make no exception for legitimate reasons why someone might quit a position. There are such reasons: health emergencies and other personal events could reasonably force a person to leave an office early. But any mechanism to assess this on a case-by-case basis is likely to be clumsy at best, corrupt at worst. Serving in the political service is a privilege, not a right. We certainly want to ensure that this privilege cannot be removed in a discretionary way, but it is reasonable to suspend this privilege on the basis of something as clear and non-discretionary as whether a person served a complete term in office. Notice, however, that this does not necessarily mean removal from the political service. Most jobs in the political service are actually with either the proposing or support agencies. Such jobs do not require jurga confirmation.

Example 5.5.1. Alice is a mid-career member of the political service who receives her third jurga confirmed appointment overseeing a small agency. A few months later, she learns that she is unexpectedly pregnant. On the birth of her child, she resigns her position to take parental leave.

Alice is subject to the two year penalty; there is no appeal. Also, by leaving early, the appointment does not count toward the three junior positions she needs to be eligible for senior offices. Nevertheless, her employer is actually the political service, not the department she oversaw. She can take her leave with the pay and benefits associated with her current rank and level of seniority. Moreover, when her leave is over, she can take a position with one of the proposal or support agencies, since these positions do not require jurga confirmation. Once her penalty has elapsed, one of the proposing agencies (presumably the one she is working for) can advance her as a candidate for office again. The jurga will see that she quit her previous post, but she will also have an opportunity to explain why; it is ultimately up to the jurga to weigh all the facts.

The flip side of this is that we have no political mechanism for removing anyone from office. Mechanisms like impeach-

ment are clumsy at best, corrupt at worst. While the intention might be to remove the incompetent or venal, in practice they are often used by the incompetent and venal to attack enemies. Systems that depend on such mechanisms have usually granted executive offices too much power to begin with. We have chopped up the grant of agency sufficiently that the cost of an incompetent officer is far less than the cost of the internecine warfare that accompanies a removal process.

The only way any office holder can be removed is by being indicted for a major crime. If the indictment results in a conviction, then the two year penalty is applied, otherwise it is not. This is potentially subject to abuse. But we certainly don't want to grant office holders immunity. Indictment is a process with significant procedural safeguards of its own, most notably a grand jury. Also, the office bringing the indictment must be a jurga confirmed office, creating another layer of accountability. Any person using a law enforcement office to go after political enemies will have to face the jurga again. Also, since jurga positions are assigned at random, any person wishing to use the power of law enforcement in this way may have to endure years of unrelated political jobs before getting lucky with a position in law enforcement. Indeed, a person trying to politicize prosecutions is more likely to find himself on the opposite side of that ledger.

Accountability

Since we have no mechanism to remove anyone from office, we need other more subtle mechanisms of accountability. Ultimately, however, the only body that is officially able to hold officers accountable is the jurga, and the only mechanism for this is the scores that the jurga hands to nominees for office. The first accountability mechanism is therefore the frequency with which officeholders are rated by the jurga.

Secondly, every time a person leaves a jurga confirmed position, the holder of any office that is closely related in the organizational structure must submit a letter describing his experience working with that person. These letters remain sealed until the next time the person in question goes before the jurga. A similar procedure should exist to get input from senior civil

servants and others who may have worked with this person. The next jurga will have a substantial body of information to judge that candidate.

Having candidates reviewed frequently by the jurga, and collecting high quality information for the jurga, are the major mechanisms of accountability. The system tends to better results probabilistically and incrementally. These processes may seem weak at first, but repeated often enough, they are quite powerful. We also avoid highly disruptive mechanisms like impeachment, as they favor aggression. Accountability should just work, quietly but inevitably.

The use of a coordination hierarchy prevents a lot of damage that might result from a malicious politician. Unlike in a command structure, the holders of all positions are determined outside of the hierarchy itself. The scope of each office is enforced by the oversight authority and the judiciary, so even a high office will have a very limited ability to impose corrupt orders. Implementation always goes through a chain of offices, so hiding nefarious plans is next to impossible. This is another reason to emphasize that only leaf offices can have a native portfolio. Higher offices operate exclusively through coordination and harmonization.

These mechanisms reflect our broad view that procedural discretion tends to favor aggression rather than justice. This rewards the bold, not the wise. Instead, we use short terms of office, offices with highly circumscribed authority, and random selection of qualified officeholders to create the best possible context for ethical behavior. Beyond that, we want to gather high quality information about each member of the political service, so that the jurga can perform its duties as well as possible.

Public Mandates

The executive and oversight authorities form a political layer that is more pluralistic and robust than current executive branch structures. As a result, it is possible to extend the political layer into areas that would be viewed as invitations to corruption and abuse under a unitary executive. In particular, we can create offices that are embedded into organizations

that are not government organs, but which have significant power due to their scale and activities. Such organizations would be given a "public mandate": a statement of accountability to the public which would be enforced by a political office embedded in the organization.

Example 5.5.2. A privacy law is passed which regulates the way in which companies can share customer data. As part of that law, a jurga is convened once every two years to identify companies that have a structurally significant role in collecting, storing or sharing customer data. Each of these companies would have a political office embedded within it, dedicated to enforcing the mandate of the law. Each of these offices would be a leaf office of a single, more general office which enforces privacy law across the country.

This is possible due to the pluralistic nature of the political service. Under a command structure, such an office would undoubtedly tend toward corrupt practice almost immediately. To reinforce this, such offices should be structured as committees more along the lines of the oversight authority, even though they exist within the executive authority. Such an office should have the power to issue legally binding orders to the company, so long as those orders fall within the mandate of the law. They would also have the power to examine any company documents that fall within their mandate, though they would have an obligation not to disclose proprietary information unless necessary in carrying out the mandate. I call these offices *public mandate offices* or just *mandate offices*.

Mandate offices represent a significant extension of the democratic sphere, and will undoubtedly cause alarm from civil libertarians. I have serious concerns about this mechanism myself. Unfortunately, we live in an era in which a variety of corporate bodies have become laws unto themselves. Systematic lawbreaking has become the norm among technology companies, particularly those that blur the line between being a platform and a service. In addition, a number of autocratic countries have shown a powerful ability to undermine democracy. They have done this by co-opting companies that operate under horse-and-buggy notions of commercial regulation. Such governments have none of the constraints that democracies face. The democratic world is

fighting with one hand behind its back, and it is losing. Some consideration of unorthodox solutions is warranted.

5.6 Why the Executive is Hierarchical

Our original goal was to break up the unitary executive, and replace it with structures in which each political office has its own mandate and is not subject to command authority by any other office. We have done this, but we have also preserved the hierarchical nature of the executive branch. It makes sense to ask, what is the hierarchy for? Is it about a hierarchical model of human nature, in which the best people rise to the top and are rewarded with more power? Or is there some other dynamic at work?

It should come as no surprise at this point that we reject the hierarchical view of human nature. Yes, some people are better than others at some things, but talent is spread pretty evenly throughout the population. In many cases, talent isn't the issue: government officials are better if they are just reasonably competent ordinary people. Prodigies and geniuses often make poor public servants.

The purpose of the hierarchy is instead to properly classify and handle issues that cut across the responsibilities of multiple offices. Issues of great generality percolate up the hierarchy, whereas issues of high specificity fall down. Offices of greater generality should be staffed by more experienced leaders due to the higher leverage associated with these offices. But in an important sense more general offices do not actually have more power. They have no control over who occupies more specific offices, and even the apex officeholder will routinely see matters that he might like to influence, but which by law he cannot.

It is entirely possible that the apex office will become quasi-ceremonial, as it will have very little real authority. In a command hierarchy, the chief executive is a kind of poacher, leaving boring tasks to subordinates, but taking over on matters of interest to him. In effect, the chief executive temporarily commandeers a subordinate's portfolio whenever he wishes to. Without this privilege, there may not be much left for the apex office to do.

At its core, public administration requires a hierarchy to function. The failure to acknowledge this reality has been the shoals on which many revolutions have run aground, particularly left wing revolutions. Left wing revolutions generally start with the notion that there are no great natural difference among populations. While I share this premise, as an immediate consequence, most left wing revolutions assume that the government will ultimately wither away. Right wing revolutions on the other hand tend to succeed because the hierarchical view of human nature, while false, readily lends itself to the structures that are required for governance.

We settle this account with a simple proposition: human nature is flat, but public administration is hierarchical. The trick is to create political structures that fully address the breadth and complexity of governing a modern state, while populating these structures in a way that reflects a fundamentally egalitarian conception of the human species.

5.7 Emergencies and War

No issues challenges the desire for truly democratic rule than emergencies and war. Dictators throughout history have invoked these situations, real or imagined, to seize power and squelch dissent.

Our strategy is to withhold the grant of agency for dealing with war and emergency until the last possible moment, and then withdraw it as soon as possible. While the grant of agency is active, we wish to ensure that all political parties are informed so that they can make reasonable proposals in accordance with isegoria. I have placed a detailed blueprint for dealing with emergencies and war in appendix A.3, but basically, a special manager will be appointed in accordance with isegoria and isonomia, with a mandate tailored to the circumstances. Importantly (and unlike the Roman office of dictator) the special manager will be an ordinary part of the executive authority, and will act only by setting policy to be implemented by lower offices. Thus the pluralism of the executive is maintained even in the most extreme circumstances.

5.8 The Civil Service

The political service forms a distinct layer in the government. The civil service forms another critical layer, one that is much larger but focused on operations more than policy. But when a political system becomes paralyzed, the civil service finds itself embroiled in politics by necessity. In that case a technocratic government is formed, in which high level civil servants and other subject matter experts take over the reigns of state.

There is some appeal to this form of government, as it sidelines professional politicians who are, as a group, distrusted. Nevertheless it introduces problems of its own. While technocrats are often less venal than politicians, they can be more territorial, as civil service professionals often spend their entire careers working in a small number of closely related agencies. By the same token, technocrats often have a narrow intellectual focus which prevents them from making good big picture policy decisions.

I don't wish to bash the civil service. I have a generally high regard for the professionals who carry out essential tasks within the bowels of government. Indeed, what separates developed from developing countries is not so much a robust private sector, but an honest and competent civil service that operates in a mostly invisible manner to keep society functioning. The tragedy of technocratic governments is that they are a bad solution to an even worse problem.

The political service in jurga democracy is designed precisely to fix this problem. It is continuous, pluralistic, and independent, so it cannot come into crisis, at least not in the sense that a parliamentary or presidential system can. And with random selection, its officers are generalists without strong territorial ties to any particular agency. The political service is uniquely structured so that it cannot be "politicized" in the traditional sense, but it can still provide independent oversight of the permanent organs of government.

A brief examination of the phenomenon of "politicization" is in order here. The phrase is thrown around quite a bit, and always with a negative connotation. In the context of the executive branch, it usually refers to appointments that are made to increase the power of a particular political faction (or weaken

an opposing faction) rather than carry out the mission of the target office.

The special magic of the political service is that it makes such factionalism almost impossible, statistically speaking. In a coordination hierarchy, most issues of any significance will involve many political offices, whose officers are almost certain to have a mix of political affiliations. Politicization in the classical sense depends on determinism and the unitary executive. A political service so constructed can be trusted to do what the political layer should do: both empower the civil service to accomplish its tasks, and ensure that those tasks are, in fact, what the people want, as expressed by the jurga.

5.9 Administrative Divisions

As with the legislative branch, I reject the idea of dual sovereignty for the executive. This means that each executive office will be a part of a single authority, either the executive authority or the oversight authority. In particular, apex offices such as mayor and governor will not exist. This may be disorienting or even alarming to people accustomed to the current system, as these apex offices are seen as a bulwark against overreach from more distant offices. But that is only because when governments are command hierarchies, the apex office is the only independent office. Under jurga democracy, *every* office is fully independent. This offers greater protection against overreach, not less.

The lack of apex offices for provinces and local governments allows us to utilize the executive and oversight authorities much more effectively as scoping mechanisms. At present, the top law enforcement officer of a city reports to the mayor. Under jurga democracy, the top law enforcement officer will not *report* to anyone, but the most immediately general office will be a law enforcement office at the provincial level. This is a far more natural pattern for dealing with issues as they come up in practice.

The political service should allow smooth career paths for officers who wish to move, say, from local to provincial, or from provincial to national. In order to facilitate this, the political service should be a single employer encompassing all ad-

ministrative divisions. In addition, some equivalence or "partial credit" should be given for service at different levels of government. For example, at the national level, we require three complete terms in a junior office in order to seek a position in a senior office. But a person who has served a term in a *senior* office at the provincial level should be allowed to use that for the prerequisite. Here, we are equating a senior office at the provincial level with a junior office at the national level. An office seeker could use perhaps two such provincial terms against the national prerequisite.

Chapter 6

The Judiciary

The judiciary is the branch of government best suited to pooled service from the start. Judges are already pooled in many districts, with cases assigned to judges on a nominally random basis. Our task is to formalize and extend these aspects of the system, while removing the kind of determinism that is so deadly to the integrity of all democratic institutions.

In keeping with U.S. practice, I envision a single set of courts with three levels: trial, appellate, and last instance. This model can be easily adapted to other systems, including systems with separate constitutional courts.

6.1 Technology and the Judiciary

In the U.S., courts have been historically based on small geographic territories, with larger geographic circuits defining the territories of the appeals process. Among worshipers of the U.S. constitution, it is not unusual to wax poetic about the good old days when a judge would ride his horse from town to town, hearing appeals cases from across the far flung outposts of his circuit.

Such nostalgia is misplaced in the modern world. Technology allows us to consider irrelevant the location of the judges, justices, and all the parties to an action. We bake this idea into the system from the beginning. All court proceedings must, within reason, accommodate parties in any location. Territo-

ries can be created by the jurga if they are politically desirable, but they should only reflect a conscious political choice, not anachronistic concerns about distances traveled on horseback.

6.2 A Judiciary with One Level

First we consider a judiciary with only a single level. Similar to judicial systems around the world, judges are appointed for life. Unlike other systems, judges cannot be removed for any reason other than criminal indictment. This is because we subject judges to ongoing evaluation by the jurga. Judges who consistently act contrary to the favor of the jurga will find themselves in a nearly retired status.

For example, say there are fifty judicial vacancies at a given time. Uniformity of decision making is essential to perceived legitimacy of the judiciary, so we are more interested in eliminating weak and highly ideological candidates than promoting strong ones. We submit 100 candidates to a jurga, which gives each candidate a score. We reject the lowest scoring 20% of the candidates, reducing the pool to 80. Then we apply proportional confirmation in order to make the final selection.

Unlike with the executive, however, the weights conferred by the jurga stay with the judges. When a case is filed with the courts, the required judges are assigned randomly *by weight*. Thus judges who are favored by the jurga hear more cases. Some allowance will have to be made for caseload, however; a judge with a very high weight simply will not have the capacity to hear cases in proportion to his score. But we should certainly get as close to the ideal as we can, without punishing ourselves for falling short due to practical necessity. On the flip side, judges with low scores will have a lot of free time on their hands. This is by design, and points out that the judiciary will need an excess of capacity from a pure working hours perspective. This should not be seen as waste, but rather as an expression of the jurga's wishes.

These weights will have to be updated periodically. We used a period of two years for executive appointments in order to have many reviews of administrative performance. We can go slower with the judiciary, reviewing each judge perhaps every five years. Whatever the number of years, a jurga

will be convened to review the performance of a group judges at a time, and the new weight will be used for assignments moving forward.

Base pay for judges should be commensurate with high level professional employment, and should be guaranteed for life. In order to align incentives with the will of the jurga, we add a component of bonus pay, which is proportional to a judges score. We get the best of both worlds: judges are insulated from short term political concerns by lifetime job security and pay, and yet have some financial interest in keeping up with social and political changes in the long term.

6.3 A Multi-level Judiciary

Extending the single level court system to a multi-level one is easy. For the appellate and last instance levels, we already have a pool of judges who have passed muster with at least one jurga. As a result, there is no role for the proposing agencies. Each judge in the lowest pool will be rated by a jurga upon attaining some level of seniority, say seven years. As always, they are rated in a group, and due to the relatively small number of appellate judges required, a large percentage—say 70%—will be eliminated by deterministic rejection. The remaining 30% will take their rating with them and be part of the appellate pool. When appellate cases arise, judges will be selected at random according to weight. It is desirable to have every judge rated at every level, but if this proves too much of a burden, then we can also use some combination of methods from section A.3 to cut the pool down.

For the highest level of the court, we apply the same process to promote judges from the appellate level to the last instance level. For seniority, we simply require a judge to have completed a single five year term in the appellate pool. There is no "supreme court", there is instead a pool of judges who can be selected for cases. In addition, a judge can be part of multiple levels at the same time, meaning she might preside over a trial one day and hear a last instance appeal the next. Higher levels should take precedence, however, so that a judge with a high score at the appellate level will rarely preside over trials. Nevertheless, each level has its own score,

and each score should be renewed periodically, which for us is every five years. It is possible for a judge to hold a high score at the highest level, only to be removed from that level entirely after the subsequent jurga rating. This reinforces the idea that judges are not empowered to advance their own agendas, while preserving judicial independence through lifetime appointment.

This system will require considerable work to match each judge's scores to cases, while still taking capacity into account. The arithmetic involved may get messy, but it shouldn't be too hard to get reasonably close to the ideal. As mentioned earlier, an immediate consequence of this system is that some judges will find themselves effectively in retirement, as few cases are allotted to them. This is a necessity. If we insist that all judges work all the time, then we are effectively giving each judge the same score, negating the benefits of continual rating by the jurga.

6.4 Administrative Divisions

The issues surrounding the judiciary at the provincial and local levels are similar to those of the executive. Since we reject dual sovereignty, there is really only one court system; local courts are delegated their authority by the national legislature. As a statutory matter, local courts can be empowered to adjudicate local laws without appeal to national courts. Constitutional issues, however, can always be taken to the national courts.

As with the executive, we wish to foster movement from local courts to the national level. For example, we previously required a judge to serve seven years on the national courts before being considered for an appellate rating. A judge coming from the provincial courts should be able to reduce this waiting period based on that service. A judge's *rating*, however, can never be transfered between administrative divisions. As with the political service, all judges should have the same employer. Changing from local to national should be no more than an internal transfer.

6.5 Rights and Duties

We have seen throughout that while isegoria and isonomia are conceptually simple, separating them in practice is actually quite difficult. Just separating the legislature into proposing and deciding chambers is laughably ineffective; proposing and deciding are fundamentally different in character. Significant pains must be taken to structure each half of this policy duality according to its own logic, and uncertainty barriers must be inserted to ensure that one side does not contaminate the other.

When we take these pains, the structural rights and duties of isegoria and isonomia are vindicated. It is essential, however, that these are understood as duties and rights. The democratic legitimacy of the jurga derives from the fact that it is an unbiased sample of the population.

Basic Law

In section 2.2, I pointed out that structural rights were fundamentally different from substantive rights, with substantive rights being similar to ordinary law, except with precedence in case of any conflict. Here I revisit that issue with the goal of establishing the procedure for amending basic law.

First, note that basic rights are actually a highly restricted subset of law. Ordinary law can do things like allocate money and create public offices. We do not expect basic rights to take such actions directly, though of course basic law will ultimately require ordinary laws to do these things on their behalf. As such, a basic right is rubric to be interpreted, not a plan to be implemented. Anything in the basic law, therefore, should contain no operational details whatsoever. Basic law should never specify what body is in charge of enforcing any right, nor what resources should be available for this purpose. While nominally a restriction on basic law, this actually enables basic rights to be a more permanent feature of law without going stale. Specific implementation schemes must change in response to conditions, but the underlying standard can remain fixed for decades or even centuries.

Since rights must stand the test of time more than ordinary laws, they should reflect a deeper level of considered

deliberation to pass into law. This does not necessarily mean that rights should be *harder* to pass. In practice they probably should be harder to pass, but this is not the goal. One technique that is often used here is the supermajority. The U.S. constitution, for example, requires a $2/3$ majority of both the House and Senate, then a $3/4$ majority of state legislatures to pass a constitutional amendment. This is certainly too hard. But aside from merely being to difficult, it is also not conducive to high quality deliberation. While many different bodies must weigh in, nothing about the process suggests that these deliberations are additive in any epistemic sense. Quite the contrary, it is more likely that the near veto power accorded to even very small states will degrade the quality of deliberations by subjecting the content of any changes to the parochial interests of those states. It should come as no surprise that the only major additions to constitutional rights in the U.S. came at the very beginning, in the Bill of Rights, and after the Civil War, when southern states were required to ratify certain constitutional amendments as a condition of reentry into the union.

I substitute multiple jurgas over time for very high supermajorities. The opportunity to amend basic law should occur at less frequent intervals than ordinary law, perhaps every five years. The initial procedure is exactly the same as for constitutional proposals, with a two-part process defining the scope of the amendments, and then getting a variety of options for a jurga to consider. (Refer to section 3.9 for a more detailed description) The result of this process will either be that the "no change" option is selected by the jurga, in which case nothing happens, or a particular proposal to amend basic law makes it through.

At this point the process changes. An ordinary law would immediately go into effect. The amendment to basic law does not. Instead, a "cooling off" period of, say, one year passes. After that time, a second jurga is called to assess only the amendment proposed. This jurga investigates the matter and then holds an up-or-down vote on the proposal. I apply a slight supermajority of perhaps 55% or even 60%, but certainly no higher. The main hurdle should not be an absurdly high supermajority like $3/4$, but rather an additive deliberative process

over time. If the proposal fails, the process ends. If it succeeds, the amendments are made a part of basic law.

Even this is not the end of the story, however. While basic law has been changed, we want the jurga to have one last chance to consider the effect of its actions. Changes to basic rights can have unintended consequences that are more difficult to change in the future. Therefore, after a year or two, one last jurga is called to consider repealing the amendments to basic law. This jurga meets, deliberates, and then holds an up-or-down vote on repeal. Again, a slight supermajority can be required, this time putting a higher threshold on repeal, not on passage.

The process here is geared toward rendering a considered decision over an extended period of time. The nature of the deliberation is slightly different in each case. We use four jurgas in this process. The first jurga considers topics for amendment, the second jurga considers actual proposals for the selected topic, the third considers only the single proposal that won the favor of the second jurga, and the fourth considers whether the changes should be kept after a period of real experience. These four jurgas are not redundant; instead, they examine changes to basic law from a series of complementary perspectives.

Citizenship

Citizenship is inextricably tied to isegoria and isonomia, the core structural rights underlying democracy. As a result, the grant of citizenship cannot include discretionary content from any government officer. Actually, the restriction is broader than this, all discretion must come from the legislative service, either in the form of a clear, non-discretionary rule, or in citizenship decisions from the jurga itself. There are a number of ways to handle this, which I explore in appendix A.4.

6.6 Constitutional Amendments

Similarly to changes in basic law, constitutional amendments proceed more slowly and deliberatively than changes to ordinary law, but should not be overly difficult. Changes to the

constitution come in two flavors: changes to constitutional parameters, and general changes to the constitution. Constitutional parameters include the number of parties in the proposing service, the number of support agencies in the deciding service, the length of the election cycle, etc. General changes to the constitution are any change whatever.

Changing constitutional parameters should be moderately frequent and incremental. One parameter is, of course, the frequency of changes to constitutional parameters. I put this at every five years. At this interval, the parties advance their proposals for changes to constitutional parameters. There are restrictions, however; each parameter should come with limits on how much it can change in a single amendment. For example, the number of parties should only change by one in any amendment. I have the number of parties starting at eight, so a given proposal for change could set the new number of parties at seven, eight, or nine. A jurga then votes on the proposals from the parties in the usual way. The jurga does not vote on each parameter, but on the overall proposals submitted by the parties.

More general changes to the constitution should be less frequent, perhaps every 10 years. In this case, the process is the same as the process to change basic law. Four jurgas will meet: the first to narrow the scope of the changes, the second to consider multiple alternatives, the third to ratify the change selected by the second jurga, the fourth to possibly repeal the change after it has been implemented. See section 6.5 for a more detailed discussion.

6.7 Jurgor Selection and Randomization

Jurga democracy depends on random selection throughout, from selecting jurgors to choosing the judges who preside over trials. Because these issues are operational rather than theoretical, they are not in scope for this book. Nevertheless, I would be remiss if I did not at least address the critical importance of random selection, and put some obvious boundaries around it. The services discussed here are so essential because they constitute single points of failure that can take down the entire system. Anything we can do to add redundancy and increase

transparency will be well worth any associated cost. I have put some details about these functions in appendix A.4.

Chapter 7

Jurga Democracy: An Overview

7.1 Using Jurgas Now

Up to this point, I have laid out a maximalist vision of a new democratic society, without regard to existing structures and how to transition from them. Let me shift gears now, and look at how the basics of jurga democracy might be incorporated into current politics.

At its core, jurga democracy depends on proportional isegoria and sampled isonomia. Convening a jurga is something that any advanced state can do now. While it may not meet our full ideal, most states enforce mandatory service in the form of juries, and in military readiness.

Proportional isegoria is harder. Nevertheless, the membership of the legislatures of democracies is a proportional representation of the electorate, however distorted it may be by malapportionment and gerrymandering.

We can therefore rely on the legislature as it currently exists to approximate proportional isegoria. What remains unchanged is that legislation is a two step process. First, the legislature passes (by majority) a topic. This part is not proportional, but we are working with what we have now. Then, groups within the legislature write bills to address that topic. Any group of legislators, including a single legislator,

can sponsor a bill. This results in some number of proposals, a subset of which will be advanced to the jurga. So what weight do we give to each of these bills? Simple: the percentage of the chamber that cosponsors that particular bill.

Example 7.1.1. In a unicameral legislature of 100 members, there is majority support to reform the agricultural sector. This support comes from many perspectives: farmers who want better pay, environmentalists who want to cut pollution, and animal rights activists who want to improve standards for livestock, among others. As a result, while there is a majority for reform, there is no majority for any particular solution.

The various factions can agree to a statement of goals, however. At this point, groups within the chamber write their own bills, with no obligation to honor party lines. In the end, five bills come out of the legislature: one representing farmers, one representing environmentalists, one representing the animal rights position, and two representing more status quo business interests. The weight of each bill is just the number of cosponsors divided by the total number of members in the chamber. Each member can cosponsor one and only one bill. By weighted random draw, the field is reduced from five bills to three, so that only the bills from the farmers, the environmentalists, and one of the business interests makes it to the jurga. In addition, the jurga can reject all of the bills, for a total of four options.

The jurga then deliberates as described in previous chapters. For the support staff, each member of the legislature nominates a person who can assist the jurga as a support manager. As before, the weight given to each nominee is just the percentage of members cosponsoring that nominee. The nominees that come out of this process are reduced in number to three by weighted random draw. Each of these support managers will then have a budget and staff to assist the jurga in deliberating.

These bills go to the jurga, who have a week with each of the support managers. The jurga ultimately chooses the bill from the farmers. Under most constitutions, however, the legislature cannot outsource final approval of a bill. But by the rules of the chamber, the solution recommended by the jurga must be considered in an up-or-down vote, with no amend-

ments, within thirty days. There is a lot of political pressure to obey the will of the jurga, so the bill passes.

While this process is less than ideal, it is a major improvement on the current system. As illustrated in the example, it allows groups that agree on a problem but not a solution to proceed in a democratic way. It also gives all the members of a legislative chamber a purpose, as they can all join in sending bills to the jurga. Right now, members of the minority may as well go home.

The legislative drafting process associated with the jurga is much different that what occurs in a 50%+1 environment. The 50%+1 threshold encourages the majority to ram through a maximalist bill. Drafting a bill for consideration by the jurga requires more nuance; a maximalist bill is not likely to win a contest of randomly chosen citizens using a Condorcet voting method.

Of course the majority can simply refuse to send anything to the jurga. But once the jurga is accepted as legitimate by the general public, it becomes more and more difficult to avoid. Also, just as submitting proposals to a jurga makes it easier to form coalitions within the chamber that agree on a problem but not a solution, coalitions of activists outside the legislature will press for change even when the members of those coalitions agree only on a problem.

In order to get multiple proposals to the jurga, and to avoid falling into duopoly, a maximum number of cosponsors should be set. For example, in a 100 person chamber, at most thirty people would be able to cosponsor any one bill. This would guarantee at least four proposals. Of course different groups could choose to submit exactly the same bill, but that is unlikely. Duopoly is an artifact of the 50%+1 problem. Even in traditional legislatures, there are factions within both the majority and the minority who differ ideologically. Given the chance, a legislator is likely join the bill that is closest to her or his own view.

For the executive branch, the cabinet (including the apex officer, whether president or prime minister) is ripe for selection by the jurga. The first and most important aspect of this process is simply to make the cabinet a pooled body, with selection for membership in the cabinet as a whole, not

for any particular post. By itself, this is a desperately needed reform for supposedly democratic countries whose executive branches look more like absolute monarchies than democracies. Unfortunately, such a change requires a constitutional amendment in most systems.

Once the cabinet is pooled, it can be structured in a number of ways. First, since each cabinet post is now independent, the apex office holder (prime minister or president) is replaced by a *coordination minister*, whose only authority is to harmonize policy across the different offices of the cabinet. The coordination minister will be much less powerful than apex office holders are now, and will probably be less powerful than core cabinet ministers, such as the foreign minister, the finance minister, and the defense minister.

Assume the cabinet has twenty-five portfolios, including that of the coordination minister. Our cabinet will have fifty officers, half with and half without portfolio. Each of the ministers without portfolio will be assigned to two separate ministries as a member of a three person committee (including the minister with that portfolio) to run the ministry. Day-to-day decisions will be made by the minister, whereas more important decisions will be made by majority vote of the three member committee. In addition, the rules of succession for that post will include the members of the committee first. This is necessary as we have eliminated the power of appointment. The ministers without portfolio form a layer of oversight and redundancy that is sorely needed.

Since the cabinet is now fifty people, we need to send 100 candidates to a jurga to be ranked for confirmation. This is easy enough: in a 100 person legislature, just give each member the right to nominate one person. There are of course other ways to do it. In a larger legislature, groups of members could cosponsor certain nominees, with a draft to avoid duplication. It's not too hard to come up with mechanisms that guarantee the delivery of exactly 100 candidates to the jurga in accordance is proportional isegoria; I leave this as an exercise of the reader's imagination. Additionally, it may be desirable to stagger terms, confirming only a fraction of the cabinet at any one time. Once all the candidates are sent to a jurga, selection takes place according to the mechanisms described in appendix A.3.

In presidential systems, it may be easier to continue with an elected president, but only appoint the other cabinet officials by the jurga. The office of president would have to be curtailed to match that of the coordination minister, but retaining an elected president would be less disruptive to the ordinary citizen. In this way, the presidency would transition from a dictatorial post to a ceremonial one, similar to the transition made by the English (later British) monarchy in the centuries after the Glorious Revolution.

The judiciary is the easiest branch to adapt to the current system. Most judiciaries are effectively pooled already, especially at lower levels. For higher levels of the judiciary, where nominations are made individually, we can use a process like the one for legislation. Groups of legislators can cosponsor nominees, who are then sent to the jurga after some of the nominees are eliminated by weighted random draw.

7.2 Current Sortition Efforts

It has been highly encouraging to see so many attempts to convene citizen panels in recent years. I certainly applaud such efforts, and I would like to see more. There are some technical problems with these efforts, most notably a reliance on volunteers that undermines representative quality. While efforts are made to enforce diversity on a small subset of properties, these efforts will never reproduce the inherent diversity of truly random selection with compulsory participation.

My primary criticism, however, is the focus on proposals, rather than decisions. Consider the French Citizen Convention on the Climate (CCC), meeting over six weekends ending in January 2020. Its mandate is to define a series of measures to achieve a reduction of at least 40% of greenhouse gas emissions by 2030 (compared to 1990) in a spirit of social justice[1]. This is an extremely open ended mandate. More importantly, it is not likely to produce any new or innovative suggestions. Ordinary citizens are quite capable, but they are not going to invent a new solution in six weeks that has escaped an armada of experts for decades.

[1] https://www.conventioncitoyennepourleclimat.fr/

The CCC came as a response to the "yellow vest" movement, which was a protest against the high cost of living, income and wealth inequality, and a carbon tax, among other things. Instead of an assembly with an overbroad mandate to make grandiose suggestions, we need citizen panels to come to decisions, which is where professional politicians fail so miserably. In the case of climate change, we know what policies are needed: they are things like carbon taxes, cap-and-trade systems, etc. Also, when it comes to wealth and income inequality, we know what works: income taxes, minimum wage increases, etc. All of these policies are easily parameterized. Both a carbon tax and a cap-and-trade system are driven by a single parameter: the price of carbon for the former, the annual carbon allowance for the latter. Clearly, wealth taxes, income taxes, and minimum wages are also driven by simple parameters.

The French legislature could instead pass a law combining many of these ideas, but leave the parameters up to the jurga. For example, imagine a law which has a revenue neutral carbon tax. All of the money from the tax would go toward a wage subsidy on low wage work, effectively increasing the minimum wage. The only parameter would be the price of carbon. Every year, a jurga would meet to determine the price of carbon for the next year, perhaps with a cap on the percentage change from year to year. The higher the price of carbon, the higher the wage subsidy, so environment and social justice are linked.

These kinds of decisions—ongoing adjustments to legislative parameters—are a large area of corruption in the current system. How many cap-and-trade plans have been rendered ineffective by special interests that lobby over time to raise the cap beyond a useful level? The jurga can be a tool to keep such policies fresh. Such situations are conceptually simple but politically difficult, which makes them perfect candidates for direct democracy. As I see it, this is where the jurga can prove its worth. Citizen assemblies that focus on proposals provide cover for politicians afraid to put forth their own ideas. Meanwhile, backroom deals and special interest politics will still dominate the final product. We don't want citizen panels to become yet another weapon of partisan

warfare. We want them to provide real relief in the face of political gridlock. It is the decision side of the ledger that must be reinforced, not the proposal side.

Start Small

We want the state to build the capacity to call jurgas on a regular basis in order to make decisions that the current political system cannot make with legitimacy. What decisions are most ripe for early consideration as the state climbs the jurga learning curve? I return to example 3.9.1, the use of a jurga to set a minimum wage. If we use an anonymous jurga, and simply take the average of each jurgor's preferred wage (within 10% of the previous year), then the result is a continuous function of jurgor preferences. This makes decisions highly stable, protecting perceived legitimacy even if the early jurgor selection process is not ideal. Limiting the amount of change at any one time also adds stability. Jurgas structured in this way have the best chance to demonstrate policy convergence.

The minimum wage is a classic example of a policy that is conceptually simple but politically fraught. Political systems struggle to keep the minimum wage up to date because special interests dominate the boring details of legislation, and because legislators themselves are out of touch with what the minimum wage means for large swaths of the population. The technocratic solution is just to index the minimum wage to inflation or cost of living. But this is problematic for two reasons: first, it hands power to the executive branch that should belong to the legislature; and second, it ignores the fact that the minimum wage must adjust to social and political conditions, not just narrowly economic ones.

Another source of early decisions for a jurga is revenue neutral taxes. Above we considered a carbon tax in which the revenue would go to a wage subsidy. This allows the jurga to consider both sides of the equation: the costs that it would impose, and the benefits it would provide. Since policies like this can be designed to depend on a single parameter, they are also eligible for an anonymous jurga.

If and when simple jurgas like this gain legitimacy in the eyes of the public, more complicated policies can be tackled.

One possibility is income tax rates. This again is a policy that everyone understands, but whose content becomes warped by special interest politics. Most people know what the structure of an income taxes looks like: it consists of a small number of income brackets, and a marginal rate associated with each bracket. These rates should be progressive in that higher income brackets have higher marginal rates. Such a policy cannot be reduced to a single parameter, so a jurga setting the rates would require a slate of proposals made in accordance with proportional isegoria.

7.3 How Much Does It Cost?

Jurga democracy would undoubtedly cost more than the current system, especially for the legislative function. Overall costs would depend on how many jurgas ultimately get used in a given year, the costs of jurga infrastructure, and many other factors. Nevertheless, if even a modest improvement in epistemic quality and democratic morale can be achieved, the cost will be well worth it. Democracies devote a pathetically small amount of money to the legislative function. In the United States, the House of Representatives spent about $305 million on operations from April 1, 2019 to June 30, 2019[1]. The Senate spent about $466 million from October 1, 2018 to March 31, 2019[2]. Annualizing these numbers, the entire legislative function costs just over $2 billion per year[3]. This is a ridiculously small amount of money, considering that the legislature sets the rules for a $20 trillion economy. A 10,000:1 leverage ratio is ripe for corruption. If we were to increase the legislative budget by a factor of ten, we would only need to increase its operational effectiveness by a tiny amount to see a net gain.

We see a similar phenomenon at the cabinet level of the executive branch. The U.S. currently has twenty-three cabinet

[1] https://www.house.gov/the-house-explained/open-government/statement-of-disbursements

[2] https://www.govinfo.gov/app/details/GPO-CDOC-116sdoc2/GPO-CDOC-116sdoc2-1/context

[3] I say the legislative *function* rather than *branch* because the legislative branch in the U.S. includes funding for things like the Library of Congress that are not legislative bodies *per se*.

level officials. Each earns around $200,000 per year, for a total of around $5 million in annual salary. Adding staff might increase this by a factor of ten or twenty, which still means that around $100 million per year is spent on the apex political offices of bodies that control trillions of dollars in spending. Again, even a significant increase in the cost of this political layer would be justified by only small gains in performance and perceived legitimacy.

Further, there are some savings that may not be apparent at first. Traditional political campaigns are nearly eliminated. In addition, a large percentage of the spending on jurgas goes to salary for ordinary citizens; for most jurgors, the income will be a boost over their regular jobs. Jurga service takes on some of the properties of a national income program.

So how much does the jurga cost? A jurgor will be paid about what legislators are paid now, say $200,000 per year. Jurgas will meet over a month or so; I will assume ten jurgas per labor year, which amounts to $20,000 per jurgor. The infrastructure of the jurga roughly doubles this; I will assume a total cost of $50,000 per jurgor all included. A jurga with 200 people therefore costs about $10 million.

Scaling this up, we get 200,000 jurgor terms—a single person serving on a single jurga—for $10 billion. If jurgas average 1,000 people in size, we get 200 jurgas, which is certainly enough to make good decisions on major matters of policy. Further, only jurgas to judge constitutional proposals need a thousand or more jurgors, so our 200,000 jurgor terms may buy us more than 200 jurgas. Some readers may complain that the full system laid out in this book requires more than this. I agree, but remember I am deliberately writing a maximalist proposal. Many of the suggestions here are meant to illustrate what is possible, rather than what is necessary. A perfectly acceptable form of jurga democracy could fit well within the budget of 200,000 jurgor terms per year, though without all the bells and whistles.

To the $10 billion cost of jurga operations we must add the cost of the proposing and support agencies. If we have 5,000 policy employees in these agencies earning $200,000 each, we get to $1 billion in annual salary. Adding various support workers and other costs might take us to $10 billion in rough

numbers. The entire political service costs about $20 billion per year. This is ten times what the legislature costs now, but the current legislative budget is ridiculously small. If jurga democracy offers even a small performance benefit, the cost is worth it.

7.4 Patterns of Political Reform

Capture First

Among sortitionists there is a common strategy for dealing with corrupt political systems: clear away the existing structures, then open the doors to anyone who wishes to participate. This ignores the fact that many of our most corrupt practices today are themselves the product of a kind of "open door" policy. The most obvious example is campaign finance in the U.S., where anyone can contribute any amount of money to political interest groups (but not to candidates). This simply empowers special interests, both economic and ideological.

Instead, the goal of sortition should be to capture all political institutions that perform important roles in making policy, and then attach those institutions to citizen panels like beasts of burden to a yoke. Democracy is not natural, and it does not arise spontaneously once some particular group of corrupt elites has been purged. It requires strict rules, rigidly enforced. Advocates of political reform must not apologize for putting heavy constraints on political actors.

It is from the "capture first" perspective that we can see where traditional civil society fits in to jurga democracy. In many ways, it will go on just as before: there will be think tanks, private humanitarian groups, political pressure groups, etc. But they will not have the same political influence that they have today. Many of the functions of these groups have been brought under the democratic umbrella, in the proposing and support agencies. The proposing agencies in particular have greater resources to conduct their own policy research. Perhaps more importantly, there is nothing else for them to do. Currently, political parties spend most of their resources trying to get to, or stay at, 50%+1. They have an array of procedural weapons at their disposal that have nothing to do with

crafting policy. The capture first philosophy eliminates all of this. Political parties in this form simply devise their best policies, and hope the jurga agrees.

Bayesian vs Frequentist

Jurga democracy attempts to turn democratic political structures into a learning machine. Learning requires two basic components: a learner, and an external data source, i.e. "reality". The learner must exist as a continuous entity, capable of updating its assumptions to produce a new model of reality on a regular basis. Reality, on the other hand, does not need to be self conscious as the learner does. But data from this source must be sampled frequently and without bias. This sampling must take place on a wide variety of axes related to the goals of the overall system.

This suggests a natural analogy from the world of statistical inference: proposing is Bayesian, deciding is frequentist. This is only an analogy, of course: when advancing a new law or candidate, the proposing agencies are not performing a literal Bayesian update. But the analogy is a strong one, and points to some of the core requirements of each piece.

1. Proposing must be done by stable entities with a robust capacity to analyze and learn from new information.

2. The proposing function must have great latitude to explore dimensions of policy that the ordinary public might consider irrelevant or even objectionable.

3. The data source (the jurga, for us) must be as pristine as possible. Statistical noise is not the enemy, bias is. Jurga bias can come from two main sources: 1) interference from political actors, and 2) natural drift of jurgors. The first we address with mandatory participation and rigid enforcement of unbiased selection. The second we address by having each jurga consider only one question.

I wish to emphasize the need to have each jurga exist for only a brief period, to consider only one topic. Anyone chosen to serve on a jurga is different from the general population simply by serving on a jurga. This difference is small at first,

but increases over time. Amateurs become professionals by repetition alone.

Action is the default

In this system, things happen automatically, and in a way that cannot be obstructed. Change is the norm, only the content of that change is at issue. Devotees of enlightenment era political theories will object to this, as most of the classical restraints on government overreach are obstructive in nature. But this system replaces obstructive restraints with non-obstructive ones. Here are some of our non-obstructive restraints:

- *Breaking up the unitary executive* - Eliminating this most toxic of governing structures and replacing it with an inherently pluralistic system goes a long way to keeping government in check.

- *Eliminating procedural discretion* - While action is the default, that action occurs without procedural manipulation by political actors. The game is finally fair: just put forward your proposal and hope for the best.

- *Uncertainty barriers* - Random selection means political actors make decisions based on overall distributions of people and things. This makes corruption much more difficult, and it forces even the worst intentioned policy makers to think for the common good, not tailor their proposals to specific decision makers.

Political career paths are inverted

Political careers in contemporary democracies are highly volatile. Politicians face tremendous financial and psychological risk if they lose a race, and the knowledge of this possibility colors every decision they make. From a subject matter point of view, however, they have too much certainty: in running for a specific office, they choose exactly the area of policy they wish to alter.

Jurga democracy inverts this dynamic. The political service is a safe career choice, offering continuous employment

over a long period of time. With eight independent proposing agencies and five independent support agencies, the political service is highly pluralistic. Any competent policy maker whose ideology has some support in the electorate should be able to find a home. On the other hand, since offices are assigned randomly, members of the political service must grapple with a broad array of policy questions, not just their pet issues. This combination of career safety but policy volatility should reinforce a very different cognitive disposition within the political service. The new emphasis will be on curiosity and intellectual breadth, rather than on monomaniacal ideology and scorched earth tactics.

Uncertainty leads to policy convergence

When decision makers are known to those who advance proposals, those proposals reflect the idiosyncrasies of the decision makers. Even if the proposals are not explicitly corrupt, any sense that policy is geared to win votes from specific individuals degrades the integrity of the process. Writing proposals for a group of deciders who will be selected later reduces these idiosyncrasies, and hence reduces the variance of proposals even prior to convening a jurga. This narrowing of the variance is a form of policy convergence, which is a core goal of political reform.

Policy convergence is not merely a matter of lowering variance. We can lower policy variance to zero simply by making no changes whatsoever. Policy convergence is about ensuring that changes are not arbitrary, and that the broad sweep of policy is independent of the path that policy takes through the system. In our case, this means that decisions would be mostly the same regardless of the composition of a particular jurga. Requiring all the options and supporting materials to be submitted in advance goes a long way toward this goal. Having a secret ballot and support agencies that are fully captive to the jurga also helps. In addition, each jurga is of sufficient size to give a broadly representative sample of citizens, depending on the leverage associated with the topic being considered.

Politics should be boring

Politics throughout the democratic world has turned into reality TV, with emotionally driven artificial conflict the coin of the realm. The winner-take-all model plays into this, with dramatic reversals of fortune that have nothing to do with the wishes of the electorate.

The principle behind jurga democracy is that boring is better. We eliminate winner-take-all dynamics wherever possible, and relocate unavoidable winner-take-all decisions to the jurga, which is the only body that can take such decisions with democratic legitimacy. The near elimination of procedural discretion means there are no games for political parties (proposing agencies) to play. Each party has its right to propose, and cannot be denied or obstructed by any other party.

That's not to suggest that political antagonists will stop throwing food at each other. Cable TV and social media will still be well stocked with narcissistic bloviators desperately clawing for attention with declarations of calculated outrage. It's just that those actions won't mean as much. There are no procedures to manipulate, and the final decision makers, while members of the general public, will have the time and resources to get past the silliness.

Lower the stakes

Whenever possible, we have lowered the stakes of individual policy decisions. This is most notable in appointments to political offices, where even the apex office holder in the executive branch has very little power compared to presidents and prime ministers. Also, we have decoupled many functions that were needlessly joined together. For example, judicial appointments are usually made by the chief executive in contemporary democracy, forcing voters into high stakes votes that conflate judicial and executive preference. Such policy conflation is impossible to eliminate completely, but we have significantly reduced it.

7.5 The Final Word

Citizen panels have enormous potential to be bodies of impeccable political legitimacy. When called in a nondiscretionary manner, given a diverse array of options, and built around strict rules of unbiased selection and silent deliberation, a citizen panel can be the ultimate authority in democratic governance.

The jurga is just such a citizen panel, and I believe it should be regarded as the highest expression of the democratic ideal. But that legitimacy comes at a price: the jurga exercises only a very limited form of agency. Each jurga is temporary, and exists to consider only a single question. That question must be formulated in advance, with options designed so that the individual preferences of jurgors can be aggregated into a final result. The jurga is necessary, but it is not enough.

The jurga's purpose is clear, and it is hard to imagine defining it much differently that we have here. The same cannot be said for the proposing service. I have advanced a straightforward scheme inspired by relegation and promotion in professional sports, but it is easy to imagine a wide array of systems in which institutions make proposals, and are in turn captured by the body politic based on their performance. One of my great hopes for this book is to free sortition theory from the task of proving its legitimacy, and let it move on to the task of producing superior epistemic results, by fashioning different kinds of proposing services to supply the jurga with high quality, diverse policy options.

I consider myself a revolutionary. But mine is a revolution of form, not content. Jurga democracy might tend towards socialism, or it might tend toward libertarianism, I'm really not sure. Most likely, it would split the proverbial baby, choosing statist policies in some areas, and laissez-faire policies in others. I suspect the current political elite would be surprised by much of what a jurga democracy would do in practice. I welcome that surprise.

I fear that too many advocates of political reform do not welcome policy surprise. So many manifestos focus on encoding an outcome, rather than a process. But in a true democracy, the outcome should never be known in advance. Only

corruption produces predictable results. The jurga is designed with this fact in mind. It is a black box, its inscrutability is its primary virtue. Government is neither a mirror, nor a window into the human soul. It is a device for regulating society, and at its heart is "the people"; a vague, ill-defined enigma.

We will only make progress when we embrace uncertainty. Uncertainty in selection for executive office, uncertainty in which policies get advanced to the jurga, and most importantly, uncertainty in the jurga itself. Uncertainty is the only reliable guardian of a truly democratic revolution.

Appendix A

Details

A.1 Legislative Details

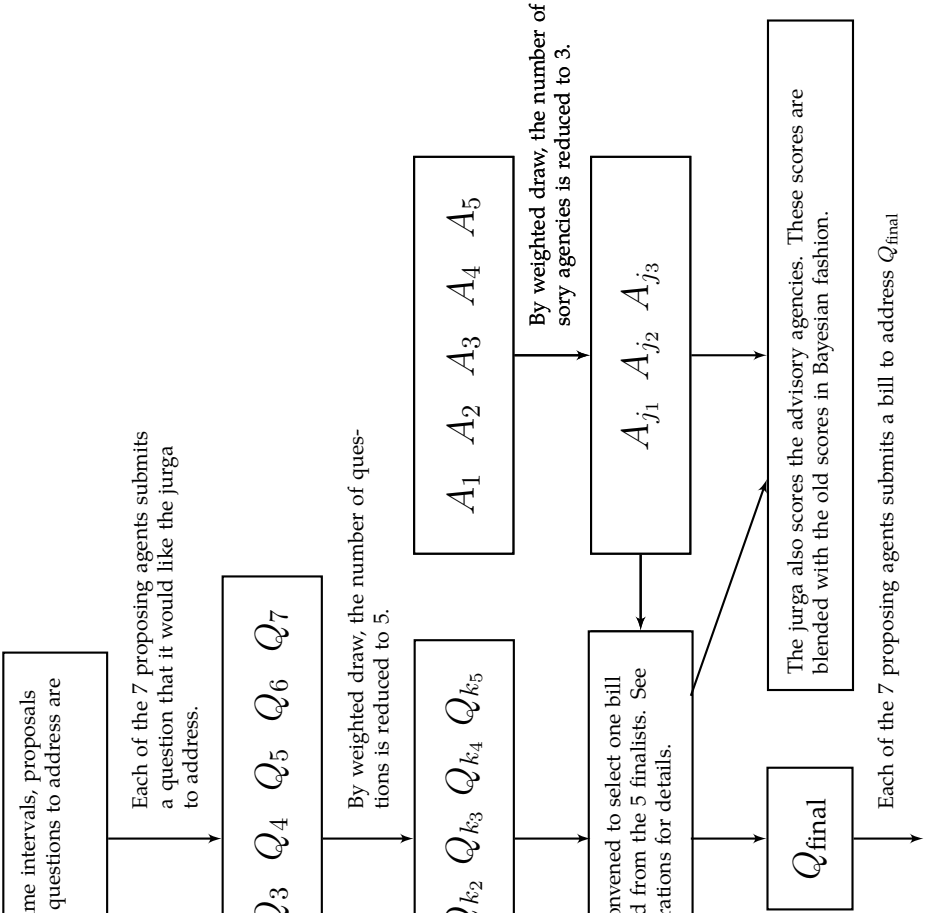
Rules for Statutory Proposals

1. All statutory propositions are bound by the question that governed the original constitutional proposition. Thus the scope of ongoing changes to the law cannot expand beyond the original question.

2. Statutory jurgas must be automatic and periodic, with limits on frequency. For example, we might say that they cannot be called more than once a year or less than once in five years.

3. Statutory jurgas come in two types: temporary and permanent. The content of temporary jurgas cannot extend beyond a fixed period, say 2 years. On the other hand, temporary propositions do not have a "no change" option. This is useful for things that must be passed, for example budgets.

4. The options that are submitted to the jurga cannot contain discretionary content except what is provided by the parties, and what comes from previous jurgas. For example, we cannot write the minimum wage provision to restrict parties to proposing minimum wages within 5% of the rate of inflation compared to the


At fixed time intervals, proposals for policy questions to address are accepted.
Each of the 7 proposing agents submits a question that it would like the jurga to address.
Q_1 Q_2 Q_3 Q_4 Q_5 Q_6 Q_7
By weighted draw, the number of questions is reduced to 5.
Q_{k_1} Q_{k_2} Q_{k_3} Q_{k_4} Q_{k_5}
A_1 A_2 A_3 A_4 A_5
By weighted draw, the number of advisory agencies is reduced to 3.
A_{j_1} A_{j_2} A_{j_3}
A jurga is convened to select one bill to be enacted from the 5 finalists. See jurga deliberations for details.
The jurga also scores the advisory agencies. These scores are blended with the old scores in Bayesian fashion.
Q_{final}
Each of the 7 proposing agents submits a bill to address Q_{final}

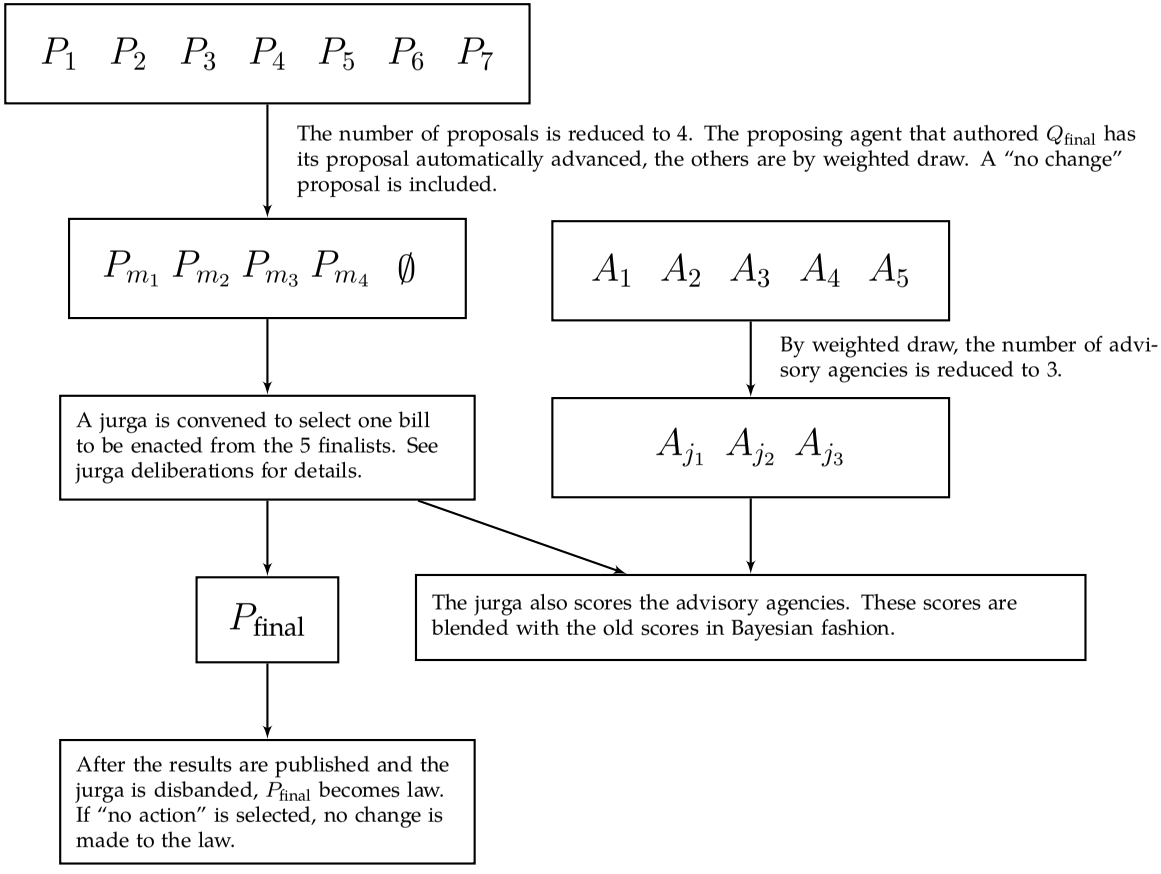


Figure A.1: Process for passing a constitutional proposal

previous year. This is because the rate of inflation is a discretionary number, at least insofar as it is produced by the executive branch. Such a provision infringes on proportional isegoria because it gives the executive branch the ability to manipulate the outcome. The law could, however, say that the new minimum wage change must be within 5% of zero, i.e. less than 5% and greater than -5% compared to the previous year. This is permissible because the only sources of the proposal are the parties' suggestions for how much to grow or shrink the minimum wage, and the minimum wage as it existed the previous year, which was determined by a jurga. The democratic "chain of custody" is unbroken.

Uses for Statutory Jurgas

Legislative Parametrization

A great many laws contain both broad structures as well as particular values; while the structures are fairly permanent, the particular values must be adjusted frequently. Such bills should contain a "parameters" provision, calling a jurga at regular intervals to adjust these parameters. In the example above, the minimum wage is such a value, but a labor law would undoubtedly contain many more. Things like workers compensation payouts, pension contributions, etc. would all be packaged under a single statutory proposal. Each year a jurga would receive proposals reflecting all of these changes. The jurga cannot makes its decision "a la carte", however, it must choose only from among what the parties submit to it.

Budgets

A bill creating a government body should also contain a statutory proposition requiring a budget for that body. Every year (or however often is defined by law) the proposing agents will submit their versions of the budget. This will be submitted to a jurga in the usual way, without a "no change" option, since budgets are temporary. In this way, we have a guarantee that every budget will be set on time, every time, from an independent selection of possible budgets.

Amend and Improve

Every law contains flaws that must be fixed. In addition, conditions change, requiring similar updates. Laws that address constitutional propositions should therefore have "amend and improve" clauses that call a jurga periodically to make minor changes and improvements to the law. A large bill might have multiple *amend and improve* sections, so that different aspects of the law can be tuned separately.

No Circularity

The jurga presents proposing agencies with an uncertainty screen, making it difficult to bribe deciders. One way that a corrupt proposer can operate is to refer specifically to the jurga making the decision in its proposal. For example, a clause in a bill could be included which says, "The members of the jurga voting on this bill will receive $1,000 each". This is obviously corrupt, and should be nullified even if it passes. Sadly, corrupt political actors are often extremely creative, so courts should be on the lookout for any provision that might contain a less obvious circularity. There should be a blanket ban on any mention—direct or indirect—from within a proposal of the jurga that will judge that proposal.

Treaties

Treaties are a type of law governing relations with other states that are negotiated with those states. This presents two challenges to this system:

1. Treaties must, as a practical matter, be presented as single propositions for up-or-down ratification. This is due to the fact that treaties must be negotiated with other states, which are unlikely to agree to four or five different options for presentation to a jurga. This is actually the lesser of the two issues. Presenting an up-or-down issue to a jurga is not epistemically ideal, but it does not violate isonomia.

2. Treaties are negotiated by an agent, usually a member of the executive branch. This is a direct challenge to

isegoria. Solving this problem will involve a fundamental change in the way treaties are negotiated. In particular, the executive branch will not be empowered to negotiate treaties.

Treaties as Constitutional Propositions

The first problem is just a fact. Treaties will not allow multiple options. Therefore when a party proposes a treaty as a constitutional proposition, it must explicitly tag it as a treaty. In the question phase, it must declare the goals of the treaty as well as the countries involved.

Once the treaty question is selected by a jurga to move on to the proposal phase, an entirely new procedure is required. Instead of selecting a group of parties to write bills, we choose a group of parties to form a negotiating committee. The party that proposed the question (the lead party) heads this committee, and will be in charge of the negotiation. The other parties selected form the remainder of the committee. While the lead party is in charge of the negotiations, the entire committee must have access to the negotiating process, including meetings, documents, etc.

Note that we have said that the party itself is the member of the committee. This is because the committee is still part of the proposal function. In practice, the parties will probably appoint a principal officer to act on the committee. But this appointment is not subject to jurga confirmation, because it is a party office, not a state office.

The treaty is really negotiated by the lead party. It may seem that the other parties have no real power. But they are in the room in every meeting, and have access to all the information. They can file protests about provisions they don't like, or things that may violate the scope of the original question. These protest will be available to the jurga that ultimately decides, as well as to the judiciary when relevant cases arise. This process accords with isegoria, but only just. The grant of power to the lead party is more than we would like. However, if we grant real negotiating power to the other parties, the results are likely to be poor. Just ask the labor movement: negotiation requires unity.

Because of the deficiencies in this process, I require a 60%

supermajority to pass treaties. I am not fond of supermajorities in general, as they are often just a tool for obstructionism. I would prefer to give the jurga multiple options, so that it has more freedom to find the best solution. That is not possible in this case. Additionally, we must compensate for the fact that we have given the lead party more influence than we would like. The supermajority should give the lead party a strong incentive to win the backing of other parties, in order to increase the likelihood of jurga confirmation.

Treaties as Statutory Propositions

For more routine treaties, a statutory proposition will suffice. The scope of such a treaty will be limited both by the question that the law was passed under, and by any language in the law limiting that power. The negotiating committee is constructed the same way as before.

Example A.1.1. A criminal justice law is passed with the following provision: "An extradition treaty shall be negotiated with countries *A*, *B* and *C*. In addition, every two years, the proposing agencies will submit lists of countries with which to attempt to negotiate or amend such treaties".

For the first group of countries, the lead party is the party who wrote the bill that passed into law. For subsequent treaties, it is the party whose list was chosen. These treaties are bound both by the topic of the original (constitutional) proposal, as well as the specific language calling for the treaties. In this case, any component of any treaty that is not directly related to extradition with the named countries must be considered invalid.

Submission of Treaties to the Jurga

Treaties are different from ordinary legislation in one other way: they cannot be submitted according to a preset schedule. Negotiations are unpredictable, and the treaty should be submitted when a tentative agreement has been reached. We can, however, grant a limited window to the negotiating committee's mandate. This should be the length of the election cycle, which is two years for us.

This is a short period of time to negotiate a treaty, particularly a complicated one. Informally, though, the foreign policy experts within each party can hold discussions with other countries on potential treaties. Thus the window for formal negotiations can be preceded by informal negotiations. This is perfectly acceptable; the process still has to go through two jurgas to be ratified. This also points out a resource that should be divided among the parties, in accordance with proportional isegoria: diplomatic presence. The parties should be allocated positions, with immunity if needed, in diplomatic posts around the world.

Another Way to Kill Parties

The main suggestion for killing of parties is just to take out the last place one. But this has a couple of problems with it. For one, parties near the bottom become desperate to claw their way out of last place, possibly by a tiny margin. This numerical discontinuity can produce cheating, as well as extreme politics as the last place party flails in its effort to survive. This is the mirror image of winner-take-all politics.

In addition, we might actually want more successful parties to be at some risk of removal. The ancient practice of ostracism—in which the citizenry could vote to exile any politician for a period of ten years—was often used preemptively, to exile those who might become a threat by being too powerful. In our case, the fear is that the top two or three parties will become permanent fixtures, while the remaining parties will fight for scraps.

To prevent this, we can use a probabilistic removal process. Rather than selecting one party to be eliminated, we select the parties to be kept, using each party's score as a weight. With eight parties, seven will be selected for survival by random weighted draw. This eliminates the numerical discontinuity of deterministic removal. It also means that, in the long run, every party will be eliminated, no matter their score. More successful parties have a longer expected lifespan, but they will die at some point. This is another uncertainty buffer, in this case interrupting the efforts of the political elite to self-replicate.

A.2 Jurga Details

Divide and Capture

This method of institutional capture is highly general in nature, and can be used in other areas of governance. It is my answer to *quis custodiet*, and can be used any time a function can be safely split into a small number of agencies with identical mandates.

Example A.2.1. A law is enacted covering the inspection of hospitals and other medical facilities. Under this law, four separate inspection agencies are created, each governed in accordance with the principles of section 3.6. Each starts with the same score, and has facilities for inspection randomly assigned to it, weighted by score. Once a year, a jurga is convened to examine the work of these four agencies, and rank them based on whatever criteria the jurgors believe is best. The scores are then updated. Every three years, the lowest scoring inspection agency is replaced by a new one.

This is a powerful tool against industry capture. One of its main features is simply pluralism: it can be used to create multiple approaches to problems that have previously been tackled by monopolies. It also provides real incentives for improvement. There is a "soft" incentive; namely a score that varies over time, and determines the resources available to the agency. There is also a "hard" incentive; namely the possibility of being eliminated completely. Elimination also ensures a minimum of turnover, so that new ideas and new personnel will enter the system on a regular schedule. I call this mechanism "divide and capture":

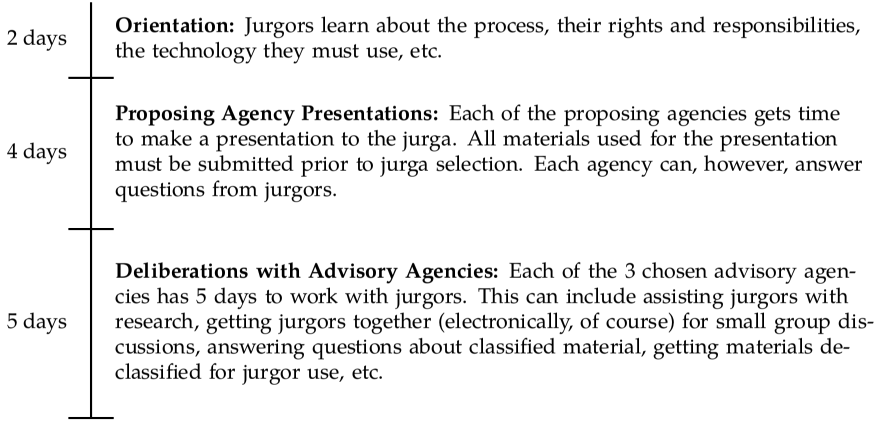
Definition A.2.1. *divide and capture* : A mechanism in which a political function is divided among a small number of agencies with identical mandates that receive scores from a jurga, according to performance. These agencies must be governed in accordance with the principles laid out in section 3.6.

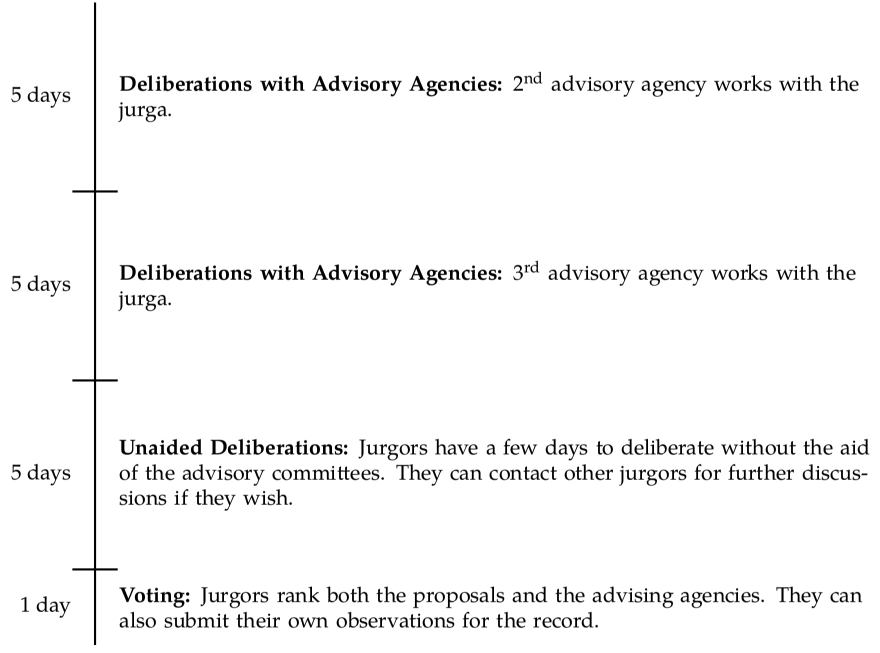
Jurga Service Requirements

For citizens who may be located out of the country's territory at the time of service, some way will have to be found to get

Some preliminary steps must be met prior to selecting and convening a jurga:

1. **Ballot Finalization:** The options that will appear on the jurga's final ballot must be set. For a law, this is done by weighted draw from the submissions of the proposing agencies.
2. **Advisory Agencies Chosen:** The advisory agencies must be determined by weighted draw.
3. **Supporting Materials:** Anyone can submit supporting materials to assist the jurga in its deliberations, however there is no guarantee that jurgors will actually review all the material. All supporting materials are immediately made public.





After voting, the votes are aggregated and the results are published. At this point, any restrictions on the jurgors, such as on financial transactions or use of social media, are lifted. The scores of the advisory agencies are also updated. The total day count in this is example is 27, which with weekends and holidays is about 6 weeks.

Figure A.2: Example Timeline for Jurga Deliberations

them to sovereign soil, whether the organic territory of the country or a diplomatic post. This decision may also depend on the country in question; it may not be advisable to use a diplomatic post in an untrusted country. If the country is a close ally, perhaps a space on foreign soil would be acceptable. The decision about location should not, however, depend on the topic of the jurga. If a location is insecure for considering questions of national security, then it is insecure for determining the national cupcake flavor. It will not be possible to reach citizens in other countries in all cases, but every effort should be made to this end, as the distributional qualities of the jurga are sacrosanct.

Here are some additional considerations for service on the jurga:

1. Jurgors should be paid a wage commensurate with high level professional employment. Service on a jurga should be attractive to citizens of ordinary means.

2. The pay should be equal for all jurgors, proportional to the length of service. Some extra pay should be given to a jurga that must be sequestered.

3. Outside employment is banned during service, with employees put on unpaid leave for the duration. However, each jurgor's job is protected.

4. Service is mandatory, even for citizens who find it undesirable. Only the most extreme hardship appeals should be honored.

5. There are no religious or conscience exemptions. However, every effort must be made to accommodate religious practice. Breaks for prayer and prayer space must be provided. Religious holidays must be honored. Since a jurga works over a month or more, it is not fatal if a few days are missed due to religious observance. Jurgas meet at regular intervals, but it is reasonable to adjust this schedule to avoid major religious holidays, so long as the overall frequency is maintained. As always, however, any adjustments to the calendar must be made before any particular jurga is convened, and must not depend on the topic being considered.

6. Accommodation must be made, at state expense, for any illness or disability short of incapacity.

7. Accommodation must be made, at state expense, for any ordinary hinderances to service; for example, child care and language barriers.

Jurga Flavors

Open Jurga In this flavor, there are no restrictions on communications among jurgors. They are free to communicate however much they wish, on whatever topics they wish. The support agencies can offer various formats for deliberation, including small groups or even meetings of the entire jurga.

While the name "open jurga" has a positive ring to it, this structure is not ideal. As suggested by *The Wisdom of Crowds*, when members of a group interact too much, their deliberations become correlated, and independence is lost. This flavor of jurga should probably never be used.

Silent Jurga This is the most basic flavor. Each jurgor deliberates alone, without any contact with other jurgors. The only contact jurgors have is with the support agencies, and perhaps some staff to help them use the required technology.

With jurgors being as isolated as they are, we can assign support agencies to jurgors in a better way. For each of the three sessions, we can assign support agencies separately to each jurgor, proportional to each agency's score. This makes better use of the support agencies, and leads to less noise in their scores.

These conditions appear to be optimal in the context of *The Wisdom of Crowds*, since it has the lowest chance of cross jurgor contamination. Unfortunately, it has some human drawbacks. Each jurgor is basically stuck in a room all day for a month or more, which can be demoralizing. Jurgors may get bored, and people who think verbally, or who feel more comfortable in groups, may not be able to deliberate effectively.

I think this method would work best for rating people rather than laws. Ranking candidates is conceptually easier than ranking laws, especially since political offices are filled by educated generalists rather than experts. Further, the

risk of contamination is greater, as the "cult of personality" phenomenon is among the most contagious and dangerous in politics. Still, I am not a behavioral scientist, so this is only a hunch.

Jurga with Small Groups Small groups seem to contradict the principle of deliberative independence, but there are a great many people who get stuck trying to deliberate alone. With a large jurga, we can get most of the independence we seek while allowing jurgors to deliberate in groups.

This works particularly well with a jurga convened to consider a constitutional proposal. Say such a jurga has 1000 people. For each of the three support agencies, the jurga is divided into 100 small groups of ten each. Each support agency conducts its small groups however it sees fit. Each jurgor therefore experiences three separate small groups with three separate support agencies. The groups are reshuffled for each of the three sessions, so each jurgor will have nine different jurgors in each small group session.

These conditions go a long way to assuring independence. Jurgors *within* each group will influence each other, but there is still independence *among* groups. In addition, the reshuffling of groups between sessions should break up strong correlations among the members of any particular group. The question is, do the epistemic advantages of small groups outweigh the costs of cross jurgor contamination? That is not clear, but it is certainly possible. Particularly with large, complicated laws such as constitutional proposals, some communication among jurgors can be a real benefit.

There are other things we can do to mitigate the risks. Since all of this takes place electronically, we can prevent things like video conferencing, as another jurgor's physical appearance can be viewed as corrupting information. Since all jurgors communicate via software, limiting corrupting information is as simple as writing some code.

Since we have divided the jurga into units of ten jurgors each, the support agencies can be assigned randomly to each group, weighted by score. As above, this makes better use of the support agencies, as well as adding greater intellectual diversity by involving all the support agencies.

Rolling Jurga Some tasks are more suited to a continuous process. In those cases we can create a continuous, or rolling, jurga. Basically, jurgors are chosen at random to deliberate on a matter that occurs routinely at a steady rate. For example, granting pardons to convicted criminals is a task that has historically been given to the executive; here is a way to make them more democratic.

Example A.2.2. Each proposing agency has the right to advance convicted criminals for pardon in proportion to their score. This is done on a continuous basis, so that a party with a high score gets the opportunity to advance a candidate for pardon more often than a party with a low score.

Once an application for pardon is advanced, it goes into a pool. Jurgors are called up on a rolling basis and given a portfolio of, say, twenty pardon applications. Each jurgor divides their portfolio in two categories: those deserving and those not deserving of a pardon. Note that each jurgor gets a different portfolio.

Each application is randomly sent to twenty different jurgors. Whoever receives eleven or more "deserving" votes is pardoned.

This jurga never exists as a distinct entity. Clearly, deliberation for jurgors must be isolated, and the support agencies assigned on a jurgor-by-jurgor basis.

A.3 Executive Details

Pooled Selection

Selection Mechanisms for Proportional Isegoria

Nomination from the General Population: We wish to submit a list of candidates of size n to a jurga in which eligible candidates are taken broadly from the general population. In this case, each party simply advances $p \cdot n$ candidates, where p is the vote share belonging to the party. (Some allowance will have to be made for rounding) The only issue here is the possibility that two parties could nominate the same candidate. We deal with this by requiring each candidate to sign a letter of intent with the party.

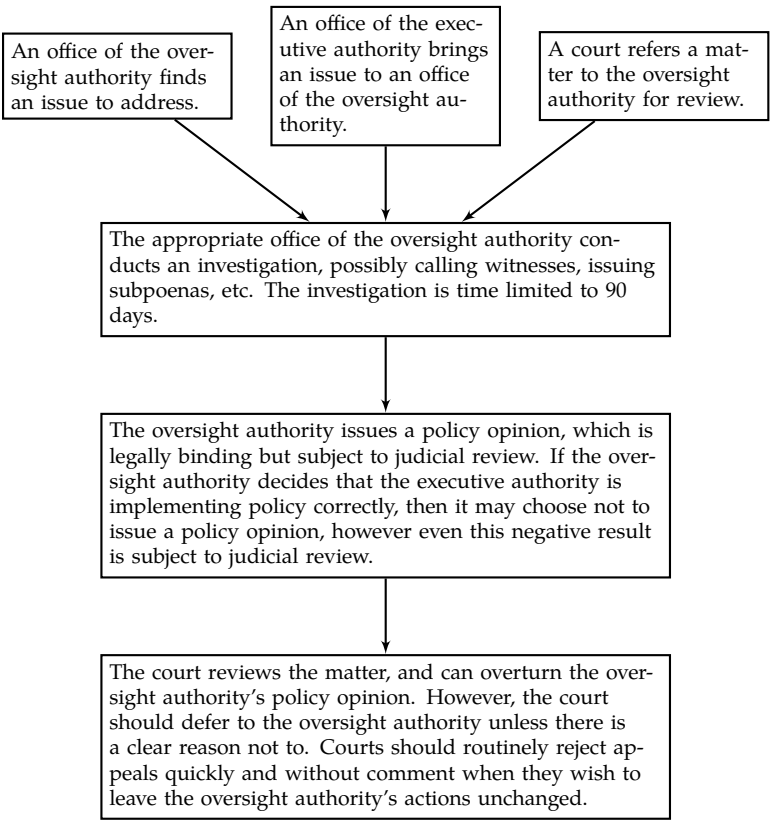


Figure A.3: Policy oversight process

Selection from an Existing Pool: Here we wish to take an existing pool of size N and reduce it to size n for submission to a jurga. We do so by allowing each party to select $p \cdot n$ candidates from the overall population of N. Here, however, the candidates are not required to sign a letter of intent with the party since they are already part of a highly restricted pool. As a result, the parties will have to make their selections in some sort of rotation, i.e. a draft.

Elimination from an Existing Pool: The objective here is the same as above; we wish to reduce an existing pool from size N to size n, but here we do so by elimination. Each party get to disqualify $p \cdot (N–n)$ candidates. Again we need a draft-like mechanism so as to avoid duplication.

The first of these methods will be by far the most common. The other two methods may find use at the appellate level of the judiciary, where there is already a pool of judges from which to select. For example, if there are 500 trial judges, and thirty open appellate seats, we can use *elimination from an existing pool* to go from 500 to 300, then *selection from an existing pool* to go from 300 to 100. The remaining 100 will then go to a jurga.

Starting with an elimination step is particularly helpful in the judiciary, where getting rid of bad judges is far more important than promoting brilliant ones. The elimination must happen first, though. If we reverse the order, then the proposing agencies are eliminating candidates that have been put forward by other proposing agencies without going through a jurga. This is a violation of isegoria. No party can reject another party's proposals, only a jurga can do that.

It could be argued that any elimination step violates isegoria by preventing other parties from nominating the eliminated candidates. But isegoria does not imply that parties can nominate anyone; we can place qualifications on candidates for a wide array of reasons. It does imply that nomination by a party cannot be a factor in disqualification. Of course, parties may choose to disqualify certain candidates because of what they think other parties want to do. The other parties do not lose proposing rights because of this, as

they never had the right to nominate any particular candidate in the first place.

Selection Mechanisms for Isonomia

Proportional Confirmation: Candidates are ranked by a jurga, and come out of the process with a "weight", a number reflecting the strength of that candidate according to the jurga. This creates a pool of candidates that have been confirmed proportionally. Confirmed in the sense that each candidate has now passed all substantives hurdles to assuming office. We say substantive hurdles because there is one last hurdle: random selection by weight. As offices are vacated, an office holder is selected at random for the vacant office, with the probabilities being the normalize weights associated with each of the remaining candidates.

Proportional confirmation is tantamount to considering the weights to be a representation score. In other words, the weights are taken as a reflection of each candidates strength in representing the will of the jurga, and by extension, the electorate. We are not concerned here with what flavor of representation is intended. It is up to the members of the jurga to determine that for themselves.

Deterministic Confirmation: In deterministic confirmation, when a vacancy comes open, the candidate with the highest weight is automatically selected for the open position. This should be viewed as a merit score. Whereas proportional confirmation interprets candidate weights as a reflection of the candidates' ability to represent the polity, deterministic confirmation interprets weights as a reflection of merit.

Deterministic Rejection: Deterministic rejection is the mirror image of deterministic confirmation. Here, the lowest scoring candidates are rejected outright. Again, this should be interpreted as a merit score.

We can combine these methods just as we did for isegoria. For example, if we need 50 candidates for 50 offices that will come vacant over the next 6 months, we can submit 100 names

to a jurga. The top 10 can be selected via deterministic confirmation, the bottom 10 can be rejected via deterministic rejection, and the remaining 80 can be selected at random as offices become open in accordance with proportional confirmation (after the top 10 have been assigned). We have thus created a hybrid score, one that blends elements of a merit score with a representation score.

Mandate Offices

Mandate offices should have some limits.

1. Mandate offices can only act in accordance with the law under which they were passed, and must be embedded within a corporate body that is specifically named in a proposal passed by the jurga.

2. A mandate office must be renewed by a jurga periodically, perhaps every five years. Again, each corporate body receiving such an office would have to be specifically named in a resolution passed by a jurga.

3. Activities protected under basic rights law must be exempt from mandate offices. An *organization* is not exempt, however; only an activity is exempt. For example, a religious organization could not have a mandate office related to its core religious functions. It could, however, have one related to its real estate holdings.

4. No legitimate order made by a mandate office can trigger a claim of eminent domain (a "takings" claim).

5. A mandate office cannot force a corporate body to restructure itself. For example, a for-profit company can still make money, and use any legal corporate structure to do it. Only a jurga can force such a change.

6. Disputes between the corporate body and the mandate office would go through the same channel as other disputes within the executive: first to the oversight authority, then to the judiciary.

Note that mandate offices can be applied to any corporate body. This includes corporations, charities, NGOs, and even illegal organizations like drug cartels. For an illegal corporate body, a mandate office obviously cannot be embedded within the organization. Instead, it wold look more like a law enforcement task force, trying to mitigate the harms of the target and bring its operations to an end. Unlike a law enforcement task force, the mandate office would be able to pull on all relevant levers of policy to achieve its goals.

A closely related issue is when to break up large companies. Such break-ups should be fairly regular events, but they must go before a jurga to be valid. A common pattern might be to give the jurga a "public mandate" option, in which a large firm would be given multiple mandate offices but would remain intact, and a "break-up option", in which the company would be broken into pieces without as many public mandates.

Emergencies and War

Emergencies

Most emergencies—natural disasters, fires, chemical spills, etc.—can be handled through ordinary statutory means. Perhaps there should not even be a special emergency procedure. Nevertheless, I will construct one that implements the core principles of jurga democracy. One of our goals will be to make it unattractive for any purpose other than a true emergency. If it proves unnecessary, all the better.

Unlike ordinary proposals, emergency proposals cannot be made on a schedule. We need a way for political parties to initiate an emergency proposal. Since emergency proposals should be consensus in nature, we require three political parties representing at least 60% total vote share to initiate an emergency proposal; these parameters should be updated based on experience. Note that the parties need only agree on the existence of an emergency, not on its nature, or on the appropriate response.

Once the process has been started, each of the parties submits a proposal. The proposal will do four things:

1. Designate an office in the executive authority which will manage the emergency. This will be a separate office, to be filled using the normal nomination process for executive offices. This temporary office must be given a position in the overall structure of the executive authority.
2. Give that office an extended mandate. This is a legally binding description of the scope of the emergency manager's powers.
3. Allocate extra money to address the emergency.
4. Specify the duration of the emergency (no more than one year).

This simplified proposal format means parties should be able to generate proposals quickly, perhaps in a day or two. In addition, it should allow the jurga to deliberate quickly, taking maybe a week.

Other than the abbreviated timeline and simplified proposals, the process proceeds as before: proposals are chosen randomly according to isegoria, and the jurga deliberates. "No action" must always be an option.

Once a proposal passes, a special officer will be chosen at random from the most recent confirmation list for executive officers, according to the normal selection process. If the office is created as a committee, then multiple selections will be made. This office will coordinate the emergency response in accordance with the mandate granted to it, and with the allocated funds.

It is important to note, however, that the tree is still a coordination hierarchy, not a command hierarchy. The more specific offices on the tree are required to enact the policies made by the emergency manager, but they are not directly under the emergency manager's command.

A few observations about this process:

1. The emergency manager is not known in advance. This is another uncertainty buffer to prevent parties from trying to steer power to their friends.
2. The emergency manager need not have any experience in emergency management. This is by design. The office holder's job is to enact policy in accordance with the

will of the jurga, not to be a subject matter expert. Each office will have a number of at-will assistants and advisors within it. The emergency manager's first job will be to hire such advisors, who will have the subject matter expertise to solve problems. In addition, the emergency manager has access to experts in the civil service. He or she should have the power to "borrow" some civil servants to deal with the emergency.

3. There is no way to renew an emergency declaration, except to go through the same process again. At the very least, this guarantees that a new emergency manager will be selected at least once a year.

War

Dealing with offensive military operations presents a unique challenge. What is the threshold for involving a jurga? Do we need a declaration of war? What about clandestine operations? What are training missions vs battlefield operations vs police actions? These problems have been exploited innumerable times to shield questionable military actions from democratic oversight.

The jurga must exercise control over offensive military operations at both a high and a low level. At a high level, the jurga must approve a mission statement, which is an overarching declaration of purpose for the particular action. At a low level, the jurga must approve a set of limitations on the use of force.

First, I require that any use of force be conducted by military personnel subject to military law. If the state wants to kill, it should have the courtesy to pull the trigger itself.

Second, I require that any legal use of force be conducted in accordance with *use of force* doctrine that is approved by the jurga. This document should be a detailed statement of when, where, and how the military can use force. Among other things, it should include rules of engagement, targeting criteria, and allowable weapon systems. The jurga does not approve specific target lists, but it should certainly control the rules under which any use of force occurs.

Any proposal to use military force for non-defensive purposes follows the rules for an emergency proposal with the following additions:

1. The proposal must specify the *use of force* doctrine for the operation.

2. The Emergency Manager must be from the highest level of the Political Service, regardless of the level of the office chosen to coordinate the action.

All military action that is not a response to an attack or the imminent threat of attack must be conducted under this procedure. In case of attach or imminent threat of attack, a permanent use of force doctrine should exist as part of the main law authorizing the military, but the permanent use of force doctrine cannot be applied to offensive military operations.

The purpose of this division to bracket military policy. The jurga has control over both the high level policy (the reasons and goals for the action) and low level policy (what soldiers actually do on the ground). An action might be sold as a mere training mission, but if the *use of force* doctrine allows kill boxes[1], the jurga might take a different view.

A.4 Judiciary Details

Citizenship

Included here are a few examples to illustrate what is and is not permissible under isegoria and isonomia with regard to citizenship.

Example A.4.1. A law states that a certain number of people will be granted work visas that lead to citizenship at random, with the number of visas divided by country of origin. The number of visas available to each country is defined in the law, with a provision that a new jurga will meet once every two years to readjust these quotas.

[1] https://en.wikipedia.org/wiki/Kill_box

This example is acceptable. The random selection of visa recipients grants no discretion to any government officers. The government just collects applications and throws them into a hat for picking. It could be argued that determining whether a given application is valid is a form of discretion. This may be the case if the application process is too vague, or contains items like an essay describing why the applicant should be allowed in. But if the application is straightforward and factual, a functioning democracy should be considered capable of determining its validity without issue. Being overly cynical is just as great an error as being naive.

Example A.4.2. A law grants work visas that lead to citizenship to any person with a PhD in the physical sciences from a list of accredited universities.

This is not acceptable. Citizenship decisions have been effectively delegated to universities. Even if the list of universities is approved periodically by the jurga, too much agency has been delegated, as the actual qualification for the visa is in the hands of universities, not the jurga. There is no problem, however, if the visa does not lead to citizenship.

Example A.4.3. A law requires asylum seekers to submit applications for asylum, which are then submitted to a jurga. The jurga ranks the applications, after which the top $1/3$ are accepted, and are then eligible for citizenship after some time.

This is acceptable, as the jurga itself is making the decisions. Again, it could be argued that the agency accepting the applications is exercising some discretion, but as long as the application process is clear, this concern is overly cynical. None of this means that the procedure here is good policy, or accords with international conventions on asylum.

In general, using the jurga to determine who should and who should not be granted citizenship is a good way to make immigration more legitimate in the eyes of the public. Moreover it is eminently feasible, because the jurga, as a nearly direct expression of the popular will, need only express a preference to be perceived as legitimate. A jurga should have considerable bandwidth to make such judgments.

Example A.4.4. A program to get athletes and performers to come to the country for commercial purposes grants customs officers the ability to assess a given applicant's skill as a performer and grant 60 day work visas to the best performers. These visas do not lead to citizenship.

This is acceptable, as the visas granted do not lead to citizenship. Note, however, that it is not a matter merely of whether these visas lead to citizenship in a *de jure* fashion. If this program is consistently used by immigrants who overstay their visas, then apply for citizenship from inside the country, the program would have to be ruled substantively unacceptable, because in practice it grants these visa holders a leg up on citizenship. Even if the ultimate citizenship question is decided by a jurga, the fact that these applicants are applying from within the country is an advantage that was not granted properly.

Example A.4.5. A law is passed which grants permanent residency (leading to citizenship) in the following way: the proposing agencies have the right, in proportion to their vote share, to put forward to a jurga a certain number of applicants. The jurga then votes on each applicant with a "yes" or "no" vote. Applicants who get a majority of "yes" votes are granted permanent residency.

This is acceptable, and is closer to how such decisions should be made in practice. The proposing agencies are exercising discretion over who to submit to the jurga. This is fine; in fact, this is the whole point of the proposing service. The rule against exercising discretion applies only to the government proper. The proposing service is the vehicle for expressing isegoria, and that is exactly what they are doing here.

In this case the jurga need not be so large. For major decisions such as new laws, jurgas should be in the hundreds, but here they can be as small as 20 or 30. These are not high leverage decisions.

The Stochastic Oracle

Generating random numbers should be a simple task: just take a source of entropy and translate it into zeros and ones. Ensuring that random numbers have been generated correctly, without interference, in a way that outside observers can verify is not so easy. Complicating matters is the fact that there are no do-overs. Random number generation is inherently nondeterministic, so throwing out any batch of random numbers in a discretionary manner is itself an act of tampering.

The system will have a separate service exclusively devoted to generating random bits: a stochastic oracle. It will do nothing other than that. Every process in the system that requires randomness will put in a request for a certain number of random bits, and those bits will be published as a public record. To the extent possible, there should be no "cleaning" of the data: the process should generate unbiased, independent random bits from the start. The amount of random data needed is actually quite small compared to the leverage it exerts, so cost should not be an obstacle. If cleaning is absolutely necessary, the cleaning algorithm must be published in advance, and both dirty and clean bit streams must be published.

Once the random bits are published, they will go through a deterministic calculation to generate the output that the client process needs. The deterministic calculation must be fully verified and published ahead of the request. The stochastic oracle will not say, "Take candidate *B*"; instead a predefined, verifiable downstream calculation will take random bits and emit a result in the desired form.

It is perhaps obvious that any downstream calculation must be defined *before* the random bits are generated, but this principle so important that it must be repeated no matter how obvious it is. One famous incident involves American football, during the 1998 season. In an overtime game between the Pittsburgh Steelers and the Detroit Lions, a coin toss was used to determine possession of the ball. The player calling the toss (Jerome Bettis of the Steelers) failed to communicate his call clearly—possibly by design—and the referee awarded the ball to the Lions. This is a case where the coin toss itself was perfectly random, but the interpretation of the coin toss was corrupt, because it was not properly specified in advance.

Simply repeating the coin toss was not an option, as the Lions would have rightly protested such a move as unfair.

Whatever source of entropy is used should be verifiable to a diverse array of political bodies. Each of the proposing and support agencies should be able to verify the integrity of the process by physical means. Any software used in the process must be open source, and should be finalized well before being officially adopted. It may even be preferable to use a process in which software is not involved. If electronics are used, an air gap must exist between the device and any network, and it should be easily verifiable that the device is, in fact, running the proper software. I am far from an expert in these topics, but fortunately, there is a robust set of results about how to do this, since it is of central importance to cryptography. Unfortunately, there is also a robust market for attacking such systems, so it will always be a cat and mouse game to some degree. Because of this, it is also important to have analysis after the fact to ensure that the oracle is working properly. At the very least, each of the proposing and support agencies should have this capability.

Governing the stochastic oracle is also a highly sensitive matter. The apparatus should be decided the same way as other political sensitive matters: by a jurga, from a set of proposals made by the proposing agencies. Administration of the oracle should be done by a panel of judges selected from the highest level of the judiciary. The judges should be rotated frequently to prevent any one person from becoming too central to its functioning. The same should be true for the physicists, mathematicians and computer scientists who design the device, as well as the technicians who maintain it. Single points of failure should be avoided at all costs.

Many of these constraints have more to do with perception than reality. For example, the is no problem with the algorithms that are normally used to clean biased or correlated random data; those are rock solid. But that extra step can be used to sow rhetorical distrust. Conspiracy theorists and other demagogues thrive on introducing such distrust. Extra steps that appear mysterious to the average citizen make this kind of disinformation both easier to produce and more effective.

The Census

Jurga democracy requires the state to maintain an exhaustive list of every citizen, and be able to reach each citizen upon selection for service. This condition is stricter than merely being able to find any citizen who might be needed for a legal proceeding such as a court case; it requires that the list exist in advance of selection. In addition, to handle localized jurga service, it must maintain the location of each citizen's residence, at least to the granularity of the smallest jurisdiction.

Such a database will undoubtedly cause significant concerns among privacy advocates and civil libertarians. I have considerable sympathy for such concerns. This function should therefore be surrounded with significant protections to prevent its misuse. The primary protection is that the database must be a one way street: the census can acquire information from a variety of sources, but it cannot be used as a source for anything other than jurga service. Even law enforcement and spy agencies must be barred from using the main census database.

In addition, the main census database should only be queryable to the extent necessary for jurga service. The main query will be simple: A string of random bits from the stochastic oracle, together with the jurisdiction and the number of jurgors to be returned. The query will return a list of jurgors. This query is deterministic for a given state of the database, since the randomness is passed in as an argument. There will also be queries to modify the database as new information about citizens becomes available.

As with the stochastic oracle, the census should only run on open source software that has been thoroughly tested. Any systems it uses should have an air gap to any outside network. There are a whole host of further security measures that should be considered but which are outside of the scope of this book.

There are some people who object to the very existence of such a continuous census on the grounds that government has no right to such information. For this argument I have no sympathy whatsoever. Regardless of any abuses governments have committed over the centuries, we now live in complex societies which require some level of participation from each

citizen to function. A well founded democracy should have no shame in doing the work needed to ensure that participation.

Governance of the census is an even more sensitive topic than it is for the stochastic oracle. The census must gather data from a variety of sources, and maintain accurate information about the entire body politic. Ideally, we would like this process to be pluralistic, but ultimately there must be a single authoritative list of citizens. One possibility is to make the data gathering function pluralistic, using *divide and capture*, and leave only the process of final adjudication to a single authority overseen by judges selected from the highest level of the judiciary.

Since the census is intimately connected to mandatory service, it is entirely reasonable to compensate citizens for helping to maintain it. Citizens should be paid a small amount for every month that they maintain an accurate record of their residence. There has been much talk in the social policy world about guaranteed income for all citizens; while this is not what I am suggesting here, it is a happy accident that paying citizens for their ongoing participation in democracy should dovetail with emerging trends in substantive politics.