

# Corruption-Resistant Representative Governance in Stochastic Democracy



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By

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# CHAPTER 1

## WHAT YOU NEED TO GET STARTED

### CHECKLIST

CONDITION	YES	Reason for Importance
Minimum population of 4169		Smaller groups are more nimble and efficient with either command-and-control or corporate-style organization.
Communication among all citizens		Availability of information and sharing of results needed for transparency and timely notification.
Well-defined and stationary domiciles		Fluid, floating, or mobile residences preclude stable geopolitical boundaries.
Ability to generate revenue and/or collect taxes		Selected officials require subsistence and support for duties apart from their vocation.

### A. Why Stochastic Democracy?

Humans are selfish, greedy, and inconsiderate, and so anarchy will never prosper. A sufficient fraction of humans are already, or easily, compromised. Therefore, any form of government that can be corrupted will be corrupted. A significant portion of humankind is willing to use violence and intimidation to achieve political, ideological, or cultural ends. This calls for a form of governance that can embrace all of its citizens fairly and equitably and operate with transparency. The concept of democracy has long been an ideal but has never been implemented in practice. This book introduces Stochastic Democracy, a system of governance nearly ideal in its ability to represent all citizens and nearly impossible to corrupt with power, money, or threats.

New forms of government historically could arise when new frontiers became populated with families. For this reason, the examples used in this book address space habitation, where a clean start is possible. These methods can also be used to initiate a new government in a failed state or as a transition away from a corrupt or dysfunctional government. Elements of Stochastic Democracy (SD) can be incorporated within existing governmental systems, perhaps as an experiment before broader adoption.

Initiating SD should be undertaken by a team of people having a variety of skills, networks, and backgrounds and implemented in a systematic way that can be observed by those who will be governed. It is advised that team members not have any conflicts of interest wherein they may benefit financially from a regime change.

The goal of SD is to create structures and processes that operate outside of the influence of special interest groups. The random number generator (RNG) is essential to SD (more in Chapter 6). True random numbers cannot be predicted in advance. SD provides a pre-defined framework within which an RNG selects the final outcome. This is the essence of a stochastic process. It is not “random”; it is a structure within which randomness can operate. As an example, you may decide to eat an apple but allow an RNG to select which cultivar of apple to eat. This is a stochastic process, and it is the core principle of SD.

## **B. Can People be Good?**

Lord Acton asserted that “Power corrupts, and absolute power corrupts absolutely.” Common wisdom says, “Everyone has their price”. Even people who are good by nature, or who have been trained to be good, or who have learned to be altruistic, generous, tolerant, and helpful can be compelled to be bad by a sufficiently heinous threat. Who among the world’s best people would stick to their principles if their dearest loved one was threatened with physical harm or death? What if an entire community or region was held hostage against the decisions of one individual? In the face of such terrible dilemmas, few, perhaps none, could stand firm.

Judgments of good and bad are arbitrary to some extent. Solzhenitsyn wrote that “the line dividing good and evil cuts through the heart of every human being.” For the purposes of this book, we will use this scale of decreasing frequency in the general population:

1. Selfish: promoting and protecting one’s own interests

2. Bad: acting without concern for harm caused to others
3. Evil: planning and acting to damage or destroy others

A finer distinction within the category of evil comes from psychology. A sociopath has a learned or acquired propensity to harm or terrorize others without regard to, and possibly with the desire to violate, social norms of behavior. A psychopath is someone lacking the ability to empathize with others and either not caring about, or actively seeking, the misfortune, pain, or death of others. These type of evil people certainly exist in every society, but they are nearly impossible to identify *a priori*.

There are no reliable means to identify evil people, so it must be assumed that any government will include such people. By contrast, there are plenty of people who sincerely desire to “give back to society” if they have been successful, or to “do their duty” out of fealty to their community or region. Good people with limited exposure to bad people do not last long in traditional forms of governance. This is captured in the adage “Good Guys Finish Last.” A key advantage SD relies upon is that evil people are relatively scarce (anecdotal surveys suggest a range between 1-in-10 to 1-in-100). The method of stochastic selection assures that bad people cannot gather too much power for themselves, or build too large a coalition of like-minded officials.

## C. What Do We Need from Government?

Governments make and enforce the rules of a society. Government delivers penalties or punishment for the violation of those rules. Historically, governments make rules that protect the currently-powerful class. True democracy would result in rules that protect everyone. This has yet to be realized in practice. A key goal of SD is the creation of rules, statutes, and regulations that can be applied fairly and equitably across all classes of citizens within a society. SD is also intended to be scalable, able to encompass a very large number of very diverse people, possibly widely separated. This is a realistic scenario for space settlement that includes orbiting habitats, populated asteroids, cities on moons, and huge complexes on Mars.

Governments are responsible for infrastructure, providing for commerce, and granting legitimacy to professionals and businesses. Governments also collect taxes and duties and use these to build roads, bridges, wastewater treatment plants, and water services. Private companies may provide essential services such as electricity, natural gas, and communications but

do so under the direction and oversight of the government. Outsourcing can be applied to any function associated with government, or the “state” can assume control of all of these services on a spectrum between distributed/decentralized and monolithic/vertically-integrated.

Governments provide for the protection of the homeland against external threats. Such threats may be aggression from neighboring countries, consequences of neglect by other societies, or acts of nature. Military defense is currently a large fraction of the overall government budget of many nations. Few are the nations who willingly merge with an adjacent country, and many are the jealous leaders who seek to acquire resources from nearby lands. Human history is rife with such conflict, driving innovation and spending in the military arts. It is possible that SD could alleviate armed conflict and greatly increase the productivity of society. This is because most military spending is ultimately wasted or, if used, generates the need for even more spending for rebuilding, remediation, or reparations. However, SD has the potential to engage diverse societies and points of view in a meaningful way that may reduce the tendency humans exhibit towards violence to achieve their aims.

A final role of government is to embody and celebrate what is unique and vital to a civilization or community. Governments celebrate past victories and great achievements and honor influential people with statues, named buildings (or ships or streets), special holidays, and grand events. The traditions of a society are often displayed by the pomp and ceremony of parades, inaugurations, ascendancies, remembrance of heroes, and even the momentous birth of a special child. Government can help provide continuity of culture across generations, providing stability, familiarity, and even joy to its citizens.

Most people don’t want government. Most would be ecstatic not to pay taxes. Most would be delighted to have the freedom to do those things that governments tell them they are not allowed to do. That is until they realize that this would mean that others could have their *own* form of freedom, which may involve wanton polluting, raucous noise, dangerous operation, blatant robbery, rioting and looting, random acts of violence, extortion, blackmail, defamation, and so on. So most people accept government as a “necessary evil,” meaning that they will tolerate it to have the safety and security they want, so long as the taxes and restrictions are not too onerous.

History is replete with lessons of failed governments that did not strike the right balance, or that unfairly treated a portion of its citizenry, or that

became excessively corrupted - and got exposed. Governments change all the time. Isn't it time we got it right? Stochastic Democracy aims to find a stable point where governance strikes the right balance and can self-trim its size to that which is needed and no more.

## D. What You Need to Get Started

Good people is the starting point. Join with people who have a good heart, meaning that they genuinely care about others and are content with, tolerant of, and non-judgmental towards how those others choose to live their lives. Good people don't endeavor to impose their own rules, culture, ideals, beliefs, taboos, or values onto others. Of course, that is practically impossible, so one must accept that even "good" people will not be *all* good. An insightful way to learn about a person is to interview their rivals, but to really know their quality, one must hear from their friends (keeping in mind that the latter is often easier to fool than the former).

Allies are essential. You need advocates, champions, elder statespersons, community influencers, faith leaders, and subject matter experts (SMEs). You must learn from this book all that you need to obtain from these allies so that you can effectively coordinate them and implement SD in your community. It is you who will create and oversee the implementation of SD. That does not make you the monarch or regent or president or chancellor or prime minister or supreme leader or any other such title. You are the facilitator. You will set up SD and then turn to other endeavors. Maybe you will help other communities implement SD. Maybe your SD will have an elected "tie-breaker" officiant, and you will be voted in by popular choice (note that not every SD implementation needs such officiants). Maybe your efforts will fail in some way, and you can teach others your lessons learned by writing a better book than this one.

You need to learn mathematics and statistics and the science of random number generators (RNGs). Before SD populates the positions within a hierarchical government, there must be an incorruptible RNG. This is physically possible but technically difficult. Not all RNGs are equally random – they vary in how many (pseudo-random) numbers they can spit out in sequence before a pattern begins to emerge. Patterns can be exploited, so a high-quality RNG is essential. Hardware-based RNGs are those based on a physical principle, such as radioactive decay, and can be harder to hack. In SD, the tools of signal analysis and information technology guide the drawing of political boundaries. The method of **k-means clustering** uses least-squares methods to draw equitable districts, and this is as difficult as

the math gets (see Appendix for more). Learn this, or have someone available who is eminently comfortable with such topics.

## E. How to Use this Book

The starting point of Stochastic Democracy (SD) is to select officials for a hierarchical, unicameral legislative body from a pool of pre-qualified volunteer candidates. Candidates must meet three criteria: not a criminal, good with money, and completes what they started (much more detail later). Postings at the local, regional, national, continental, etc. representatives are selected either from existing, seated candidates or from the pool by dividing the possible values of the RNG into **probability bins** for four choices: (A) stay; (B) return to the pool; (C) re-appointment at a higher level; or (D) re-appointment at a lower level (Chapter 9). Terms of office are staggered for a blend of continuity and fresh thinking, and a stable turnover is reached by Year 4 (Chapter 12). Districts are selected by k-means at each level of the hierarchy. Administrative functions, also known as ministries, can be guided by SD principles to retain expertise yet remain relevant and up-to-date (Chapter 10). A legal system guided by SD principles can provide equity and justice with a balance of wisdom and theory (Chapter 13).

This book teaches how to set this up on day 1, and to carry the transition through to a steady, sustainable, self-regulating government. The second half of this book addresses the need for a common defense and the creation of a constitution. Also addressed is the issue of whether the community wants an elected figurehead-and-tiebreaker, or to have the councils at each level manage their own tied votes (e.g., with the flip of a coin or having an odd number of members). There appears to be a portion of humanity who wants or needs or feels most comfortable with there being a single leader who speaks and acts on their behalf. This is optional in S.D. When including such people as mayors, governors, and presidents, they will have a strictly limited part to play in politics. These officials, elected by popular vote, are mostly ambassadors and listeners who will kiss babies, cut ribbons, receive VIPs, and preside over public ceremonies. These activities are important in some cultures, and having such a position should be a choice of the people in a given district, but this is not a requirement of SD.

The book finishes with an appendix on the mathematics and software pseudo-code for SD. The last appendix presents case studies to illustrate some of the practical possibilities for SD implementation.



## CHAPTER 2

### ARE YOU SOLVING THE RIGHT PROBLEM?

#### **A. Is there a functioning government in place?**

Governments are self-protective by nature, having been created by humans to achieve their political ends, presumably adapting over time and establishing precedent and practice through their operation. There will be a multitude of laws, actions, and actors who will resist change, especially from the outside. Working against a government is at least a conspiracy to commit sedition (overthrow of the existing government) and, at worst, traitorous (working for an enemy of the state). Penalties can be extreme. There is an apt quote from *The Prince* (1513) by N. Machiavelli:

“There is nothing more difficult to execute, nor more dubious of success, nor more dangerous to administer than to introduce a new order to things; for he who introduces it has all those who profit from the old order as his enemies; and he has only lukewarm allies in all those who might profit from the new. This lukewarmness partly stems from fear of their adversaries, who have the law on their side, and partly from the skepticism of men, who do not truly believe in new things unless they have personal experience in them.”

The common wisdom of every generation of youth is the desire to effect “change from within.” Many find that their feelings of wanting to improve or fix how things are done become balanced by their desire to earn a living wage with a steady job so that they can create a family of their own. These are the government employees and staff members who once dreamed of changing the world but now simply make their individual contributions by performing their required job functions within the system. Others may have tried to make change, only to realize that government organizations are not very tolerant of change agents. Those few able to rise through the ranks, who still have that “fire in the belly,” often find great rewards if they maintain and protect the status quo but risk losing their power and influence if they push for change too hard or too fast.

Appointed officials in a government are generally beholden to the political allies who emplaced them. Elected officials are generally powerless as individuals and so they join caucuses or political parties to increase their influence. Larger coalitions are more powerful but require greater compromise and a tendency to address the simplest common principles. Charting a gradual transition to Stochastic Democracy (SD) is likely to be possible only if a very large segment of the population is already supportive. This would require considerable skill, effort, and expense of time and resources in marketing and media influencing. As Macchiavelli aptly pointed out, this approach is unlikely to succeed.

Experimental methods can sometimes be established in well-defined and tightly controlled and closely monitored situations, but only if the experiment does not violate existing laws. Suppose a favorable elected official permits a limited SD experiment; it is to be expected that others in the government will seek out every opportunity to help create an epic failure. Even if success is obtained, others will argue that the experiment is not replicable, not scalable, and not applicable outside of the isolated study.

Small communities of like-minded individuals emerge in every human society and could become a starting point, and an example, for larger groups of people. However, small communities tend to coalesce around a central belief and often around a central leader. There is a tendency for such groups to become a cult. If there is even the hint or suspicion of being a cult, others will strongly reject SD and may even try to associate SD with a cult and thereby poison other attempts. Isolated communities of homogeneous groups are probably a poor choice for the inaugural implementation of SD.

Localities that have experienced acrimonious division and angry rhetoric around some central issue or difference in beliefs are challenging for any form of government. This sort of situation could be ameliorated by SD. The design and operation of SD principles are likely to be acceptable to all humans because they are demonstrably fair and equitable. However, if the community is small, those who disagree with the outcomes of an SD government may elect to change their residence location and move to a different city or county or state or nation. If moving your residence is easy and inexpensive, people will tend to cluster with those of similar beliefs and attitudes, furthering polarization and demonization of others [Bloom]. This is why SD is intended to apply to communities where individuals and families have a well-defined residential location – wherein people have a home.

## **B. Is there a Constitution that the people have supported?**

A constitution is the embodiment of the principles and values upon which a government is based. It defines the structure of the government, its scope, and methods of operation. A constitution becomes the standard against which new laws are evaluated. In some religious cultures, this guidance is drawn from a revered or holy text and the scholarly analysis thereof. Over time, a constitution may change or evolve as the mores and beliefs of a society change. A constitution can be thought of as the documented culture of a people, or at least those who framed and drafted it. Such a document can be of great value as a starting point, or a guideline, for drafting a new constitution based on SD. Indeed, many national constitutions are drawn from prior examples and then modified or adapted.

Space settlements may, at first, be populated by citizens of a single country or a union of countries. It is also possible to have a broad consortium, similar to the International Space Station, that includes interconnected modules from many different space agencies. As the population of a space settlement increases due to immigration, it will become more diverse. Once it reaches a size where a representative government is appropriate, there will likely be a broad range of attitudes towards government. This is where SD can be especially effective.

An SD-ready constitution can draw from existing or historical democracy-friendly documents. However, it will require specific language, including the following minimum requirements:

1. The pool of voluntary candidates for legislative selection must be pre-qualified (see Chapter 7).
2. The partitioning into districts is to be performed using k-means clustering.
3. The grouping of districts into successive levels of hierarchy is also performed using k-means clustering.
4. The regular and periodic re-selection of legislative office holders must involve a stochastic selection in which there are four possible outcomes: stay, return to pool, move up in the hierarchy, move down in the hierarchy.

Additional constitutional elements may be added which follow the principles of SD, as explained in subsequent chapters. As mentioned above, the citizenry may elect figurehead officials who also serve to settle tied votes within a given hierarchical level of the government. This is optional,

and it may change during the course of events. Other elements to consider include the management of ministries or functional departments and how the leadership and grouping thereof are managed. The judicial system can also employ the principles of SD in judge selection and appointment, as well as in jury selection and sentencing. Homeland defense can employ SD principles in conscription and even in strategy, as well as in procurement. Chapter 14 provides further insight into the development of a constitution.

### **C. Whole of government or incremental modules**

Few societies are homogenous, and nearly all will include those who are progressive and those who are conservative. Progressive people are eager to make improvements through change and are generally more favorable towards promoting the general welfare through government assistance to those who are disadvantaged or otherwise unable to secure for themselves the basic human needs of food and water, clothing and warmth, and shelter from the elements. A resistance to change characterizes Conservative thinking because of the risk it may bring to order and stability. Conservative people tend to believe in self-sufficiency and are resistant to having their tax money spent on indigent people who take advantage of social programs rather than seek gainful employment. Therefore, within a given geographical region, some localities will be more progressive than others and more comfortable trying out SD themselves.

A reasonable pathway to a whole-of-government SD system is to begin with those communities willing to try it. As they enjoy success, more conservative-leaning communities will invoke qualifiers and excuses not to try SD, a very human emotion being spite, as captured in the expression: "They would cut off their nose to spite their face." However, communities within that spectrum that are more moderate or balanced or diverse, may recognize the benefits of operating an SD system of governance, and so the experiment may expand. Human nature is to resist change, and it must be recognized that compelling a community to abandon its form of governance can evoke extreme reactions. Therefore, it should be recognized and accepted that pockets of traditional forms of government may exist within an SD framework. Legislation to account for this complication should recognize that the time it takes to change such deep-seated beliefs may take generations, but also that change can happen almost overnight under the right circumstances.

A cleaner approach is to establish SD in its entirety, as outlined in chapters 8, 9, 10, and 11. This situation arises when a space habitat is finally sealed

and filled with breathable air. It can happen when a prior government collapses. It can happen when there has been a decimation, and a community must be rebuilt. Or, it can happen when there is massive immigration, such as the arrival of the first colony ship to a remote outpost in the Outer Solar System.

A valuable property of SD is the ability to adapt to abrupt changes in population or population density rapidly. Because mathematical algorithms draw districts, this can be performed every decade as a matter of course or upon episodic events as diverse as a deadly pandemic or the dramatic increase of souls when a generation ship arrives at a science base on an earth-like world circling a distant star [Schubert 2010].

For a “clean slate” start where people are already resident, a likely concern is the loss of place names. Humans love to name things. Existing boundaries can mark a sharp divide between the names of the lands on either side of the line, and people differentiate themselves based on which side of the line they are from – which named place they call home. Rivalry between adjacent or nearby place names is endemic throughout human culture and is most evident in the matches or games between sports teams. The American term “sports fan” is a contraction of the complete word “fanatic,” as rooting for the home team is one of the most powerful and popular emotions that humans can express. With SD, there is no assurance that place names will be retained. Because the k-means algorithm is blind to political boundaries but sensitive to geographical boundaries (such as flood plains, deserts, wide rivers, and other locales where nobody has a home), there is a real possibility that one district will either include two place-names or just a portion of one place-name. Of course, residents are permitted and even encouraged to name their new districts at each level of the hierarchy, but they must understand that this may change in 10 years if many people move into the area, or out of the area. Where a district splits a named place, residents may use terms like East Place and West Place, or Old Place and New Place, as humans have done since the diaspora from Eastern Africa some 50,000 years ago. As one modern example, adjacent counties touching at the Indiana-Illinois border use a minor spelling and pronunciation change to distinguish themselves: Vermillion versus Vermilion. There are at least 20 other such examples in the US alone.

Citizens should be prepared for place names to change. This is one of the important checklist items at the beginning of Chapter 1 – the ability to communicate to all citizens in a timely manner. With new places comes the opportunity for fresh, more relevant names. As times change, culture often

changes, and places are re-named. In the US, there are military bases named after the rebel generals of the Confederacy from when many Southern states sought to secede from the union over the right to own slaves, among other factors. Names that have been in common use can be difficult to change in the minds of individuals and can be costly in terms of signage and official documents. As an example, the Deer Creek Music Center in central Indiana has experienced three name changes as new sponsors pick up the venue, but older, die-hard fans still use the original moniker. The loss of tradition with place name changes can be counterbalanced with the thrill of picking a new name, and maybe giving credit to a new hero, a new resource the area is known for, or a signature event that occurred there. Old names may be resurrected from the nearly forgotten annals of history, encouraging a new generation to appreciate the rich legacy of their native lands.

With a failed state or collapsed regime or the debilitating illness of a majority of the population, there will always be some staff, elected officials, or appointed leaders who will cling to and wish to reinstate the original order. This is understandable as most systems of government created prior to SD allow the sinecure – a position that involves an impressive title but little actual work. Most traditional governments also tolerate nepotism – the appointment of family members and close friends to positions of authority, power, and control. There is also the “Peter Principle” [Peter] that states people will rise to their level of incompetence and stay there. All such people have a vested interest in retaining the old order, especially because none of these forms of government corruption exist in SD. These privileged people will employ an endless array of techniques to maintain their advantage. One reasonable approach is to recognize that some people from the old regime may have knowledge, insight, skills, or capabilities that will be important going forward, so there may be value in keeping these officials in mind for the administrative roles of the ministries or departments as described in Chapter 9.

Chapter 6 describes the role of a census to establish the residence location of each person or family. Some people live nomadic lives, practice “couch surfing,” work as migrants, or are experiencing homelessness. The circumstances leading to a failed state often result in internally displaced persons, refugees, evacuees, and others who may lack an established residence at the time an SD government is instituted. Those who facilitate SD should create one or more internment camps so that these citizens can participate in the establishment of a new government. Some of these people may have been disenfranchised, or discriminated against, during the old regime and may be very glad to help establish a new order. A decision

should be made early on whether to draw districts inclusive of these camps if, for example, they may eventually become permanent domiciles. The alternative is to include these people in the population but to omit their current, temporary dwelling location so as to avoid artificial distortion of the districting process. Above all, it must not be practiced that persons are forced into such camps for the purposes of disenfranchisement. These poor souls should be notified early of the coming change and given every opportunity, perhaps even resources, to establish themselves in a more suitable permanent location.

#### **D. New settlements (space, undersea, underground)**

The current policy of space settlements is that the country of origin has jurisdiction there. This is part of the Outer Space Treaty [United Nations] and stems from the risks of launch or de-orbiting that may cause hazardous debris to fall onto the territory of another sovereign state. The country of origin is considered to be the guarantor of wholeness if such an accident occurs in which the damage or harm exceeds that covered by the insurers of the enterprise. Should actors from one nation attack the space habitat of another nation, this can be taken as an act of war.

Most countries would insist that any small- or medium-scale enterprise in space be governed by military-style command-and-control, at least at first. As more civilians populate the settlement and demand a voice in the conduct of habitat affairs, the host country will likely insist on emplacing a local Governor and treating the colony as a protectorate. This is a common practice on Earth wherein many islands are territories or protectorates of a larger, more powerful country. Similar arguments extend to undersea cities and underground warrens that may begin as military installations and gradually evolve to include civilians and their families. The continent of Antarctica is an example of how this is currently managed. However, once families begin to have babies, the complexity of social life greatly expands, and this is often the inflection point at which a new form of government can be established.

Remote populations such as these may petition their host country for the right to explore SD. A negative response is likely, but even a positive response might be conditional upon host country approval of any laws, or the installment of an overseer or proctor whose role is to see that the colony never drifts towards secession. The consequences of a break-away colony on the Moon were explored by science fiction writer R. Heinlein [Heinlein], with ill consequences for Earth – a cautionary tale, to be sure.

The size of a settlement to consider for SD is set at 4169 citizens, as explained in section 5.C, for a minimum gene pool, management complexity, and ratio of selected officials to citizens. Additional factors for this minimum SD population include assuming that early settlers are mostly adults, and likely including every gender, so that there will be love relationships leading to parentage leading to the need for schools and entertainment and sports, and more. These non-mission activities generally require people to set them up, manage them, operate them, adapt them as needed, and so there will become a need for a service class of individuals not strictly tied to the original mission. The minimum starting size for SD implementation should be at least this size, but there is no upper limit to the size of the population that SD can manage. If, one day, humans span the galaxy and figure out instantaneous communication, SD is an excellent choice for such a civilization to remain cohesive, intact, safe, and adaptable (see section 18.C).

### **E. Consider merger/joining with adjacent States**

Before implementing SD, one must consider whether the population is better served by merging or joining with another state having greater resources. Contrariwise, those facilitating SD might invite neighboring states to join forces and implement SD together. In a global economy, there is greater influence with greater size, and two countries merging as one may increase the whole to greater than the sum of its original parts.

Examples exist of merged countries that later part ways. Examples exist of countries subsuming another, often by force. Many examples exist of countries that break apart due to internal differences, often via a civil war. SD may not cure all the ills of human politics, but it does provide a means to be fair and equitable to all citizens. Furthermore, it offers incredible resilience to corruption. This corruption-resistant quality is so universally desirable that it can become the primary motivation for two or more states to join together.

Large bureaucracies are notorious for their inefficiency. The principles of SD offer improved methods of organizational leadership relative to traditional practices. Furthermore, the avoidance of overlapping or duplicative functions that can be realized by the union of two or more states can help to lower the taxes levied on the citizens. Lower taxes are universally appreciated and could become the primary motivation for a merger.



Differences will always exist among humans, and these differences are routinely exploited by politicians and community leaders who want to cement their own authority. By demonizing others, making them seem either sub-human or worthy only of contempt and condemnation, bombastic leaders can tap into deep-seated fears and stoke these into righteous indignation and anger. Those on the spectrum of human behavior who tend towards violence will often take this to an extreme and commit atrocities in the name of, or at the behest of, or in solidarity with, a charismatic, power-hungry leader. But most people would rather live in peace and would be content to let others live in peace so long as they are also peaceful in return. Peace can be realized through understanding, which requires dialog, discourse, and mutual respect. These positive propensities can be promoted by a truly representative government such as Stochastic Democracy. It may become the primary reason people elect to combine states into an SD regime to foster peaceful dialogue and non-violent resolution of conflict.

SD has the potential to encompass the entirety of humanity. For this to happen, states will need to either merge or agree to be part of the same SD umbrella. Many countries have well-defined geographic borders that survive k-means clustering during districting. In other cases, borders are more symbolic because the language, beliefs, and culture may vary gradually and smoothly across such crisp lines on the ground. There are many examples of sub-populations that experience disadvantages because of being located within the political boundary of a country they may not recognize as legitimate or just. SD with k-means districting can result in pleasant surprises in grouping people together at a common governmental hierarchical level (local, regional, national, etc). The implementation of SD may grow organically as additional adjacent states realize the benefits realized by their neighbors and ask to be invited to join. Because SD can scale up or down rapidly and easily, the barriers to broader participation are low. It may be that this inclusiveness and diversity bring innovative solutions to long-standing problems and help people find ways to live with others that they may not have historically ever cared to be associated with. **Uniting the common human family** may be the ultimate reason to adopt an SD government.

## F. What is the proper pace?

The approach described in this book is fast. Implementation takes just three days, presuming that all required infrastructure is in in-place. Chapter 6 addresses the preparation period for SD implementation.

Chapter 4 addresses objectors. Nay-sayers can be separated into two types: those who grumble amongst themselves and those who loudly and emphatically oppose and object and decry and warn and threaten and cast aspersions. This latter type is often angling to gather power to themselves, or they may be the remnant of the elites who profited from the old order. There are also those who take a contrary position on almost any issue, as there is fame to be gained in traditional news outlets that still endeavor to provide “balanced reporting.” Objectors will work to set up, or wait to benefit from, a failure, misstep, or delay in the SD implementation. The traditional wisdom to address this dynamic is to: “underpromise and overperform.”

Managing a complex project requires experience and skill and a high-functioning team. If you have never taken on an enterprise as challenging as that described in the remainder of this book, you will need help. Consider enlisting the services of a Project Management Professional (PMP)®, such as the certificate program offered by the Project Management Institute. A consultant with PMP after their name can create a Gantt chart for tracking progress. A Gantt chart is a timeline of the project with the various activities starting and stopping at various milestones so that you do first things first and start long-duration items early. As the project progresses, the Gantt chart is updated. Because many tasks are linked together, either in sequence or finishing at the same time, when a given task becomes delayed, the Gantt chart methodology will quantify the delay of completion. A PMP, using this and other tools, can inform the facilitator of delinquent tasks so that more resources can be re-assigned to catch up to the schedule.

In any such endeavor, there will be tension between visionary leaders wanting to move quickly and process-oriented, detail-focused people working to make sure that each step is done properly the first time. The attitude of the latter is captured in the aphorism: “If you can’t find time to do it right, when will you find time to do it over?” When communicating the timeline to the waiting public, there should be intermediate milestones so that progress can be reported. Setting a date for completion is a balancing act between being quick and being certain. The consequence of missing a key date is that objectors and detractors will “pounce” and endeavor to turn public sentiment against the SD project. The consequence of having a slow, safe timeline is that people will grow tired and bored of the wait, and alternate proposals will be floated, causing confusion. In the future, there may be consulting operations that can “parachute in” and handle all the logistics of an SD implementation. Until that point, it is wise to include a PMP or systems engineer to manage the overall project.

Chapter 3 addresses questions of legitimacy, that one can expect will be leveled against any organized activity to implement SD. The facilitator of SD is wise to learn the methods of logical fallacies used by detractors [IEP]. Some of the more likely include the ad hominem attack, in which you as facilitator are attacked, rather than SD directly. Such attacks can feel deeply personal and require considerable fortitude, forbearance and self-confidence to withstand. Another logical fallacy is the strawman approach in which opponents will misrepresent SD and then attack it on that (false) basis. It is the attack that sticks in the mind of listeners, who are often too busy to learn, or figure out, the fallacy involved. A third logical fallacy is the anecdotal approach in which an isolated or personal experience is held up as representative of the entirety. The anecdotal logical fallacy is difficult to defend against because SD aims to be fair and equitable for all. Then, if any one person is disenfranchised in some way, that single instance will become the wedge used by detractors to decry the entire enterprise. Articulate debaters use more than a dozen such techniques. In addition to learning to recognize these methods for what they are, an SD implementation team should engage with those skilled in legal arguments and media representation. While much of the team has their “nose to the grindstone,” there needs to be someone who monitors public perception, media coverage, and social media trends.

The answer to this section’s question is “It depends.” The scenarios considered in the prior section illustrate how varied and unique each SD implementation can be. Having a sufficiently large and diverse team is important because personnel will come and go as other factors in their own lives or health affect their ability to contribute. Having sufficient time and resources to accomplish the entire task is essential, and if there is not already a source of such support, the team may require fundraising from generous and visionary donors. When communicating the timeline and plan with the public, there should be a regular sequence of milestones that are announced when completed, and these should always be early or on time. When the final three days are ready, the process should have already been validated to minimize the risk of a misstep during such a critical period.

## **G. When is the right time to begin?**

Now.

If SD becomes successful or popular, and consultants can bring action-ready kits, then the implementation can proceed rapidly. If the region to implement

SD is a “blank slate,” meaning that there is no pre-existing government, it can happen quickly.

If a pre-existing government was exiled, or ran off to avoid prosecution, SD can fulfill the power vacuum with minimal preparation. If two or more neighboring states agree to merge under SD, they presumably have functioning governmental bureaucracies and agencies with people who can implement SD efficiently. For smaller, more localized trial projects, implementation can proceed quickly. It will be good to have examples of straightforward SD implementation as examples so that the inevitable delays in a more complex situation can be recognized as being situational and not a flaw of SD.

When there is no clean break, then a gradual transition can be an effective method. There is a benefit to setting a future date that is sufficiently removed in time so that debate can ensue and the citizens have ample opportunity to become accustomed to the idea of this change. Many people wish to “do their own research” before deciding for or against a new proposal. These activities can identify “blind spots” so that the facilitation team can adapt their strategy accordingly. A slow and steady pathway to SD implementation reduces the risk of missteps, and can be almost anti-climactic in its ultimate success.

As explored in Chapter 4, there will be misinformation generated by detractors. There is also the tendency for corporations to pay legal firms to hire agents provocateurs to sow doubt [Oreskes, UCS] and create uncertainty in the hopes of slowing or stalling such a change. Such agents may act swiftly because it is human nature to afford greater significance to what they hear first, making it much harder to sway their opinions later. This is embodied in the saying, “You never get a second chance to make a first impression.” [Rabin]. The SD team will be well served to prepare educational materials early, distribute them widely, and to follow up with town hall meetings to address the issues and concerns expressed by citizens.

A good practice in the run-up to an SD implementation is an early release of districting. Many districts will need new names. Engaging the public in the activity of naming can encourage their active participation and even anticipation. This can be a thrilling exercise, involving citizen suggestions and maybe a competition for the best place name. This activity provides a useful way to become a part of the transition.

## CHAPTER 3

### LEGITIMACY

#### **A. Is it the right thing to do, creating a new government?**

The quote in section 2.A was written by Machiavelli (1469-1527) just after he was exiled as a political threat. Some consider Machiavelli a founder of modern political science. He argues that it is better for a political leader to be feared than loved, and rationalizes that “the ends justify the means.” Other commenters, such as famed British philosopher B. Russell (1872–1970), call this sometimes-ruthless treatise: “a handbook for gangsters.”

New government systems are introduced most commonly through force and violence (coup d'état). Junta leaders of a putsch may have legitimate reasons to overthrow the prior ruler(s) and are interested in establishing control. Whether fast or slow, this pathway generally leads to dictatorship, autocracy, or an oligarchy. Leaders believe themselves to be better qualified and may use oppression and persecution to maintain their power. American writer G. Orwell offers this advice to the thoughtful and caring aspirants to a new system of government [Orwell]:

“The energy that actually shapes the world springs from emotions - racial pride, leader-worship, religious belief, love of war - which liberal intellectuals mechanically write off as anachronisms, and which they have usually destroyed so completely in themselves as to have lost all power of action.”

Starting a new governmental system is difficult and demanding. There will be individuals, organizations, or cultural mores that resist change. Even among members of the **Implementation Team**, there will be rivalries, jealousies, power struggles, and drama that can thwart success.

Is it the right thing to do – establish a new form of governance? The Implementation Team must be able to answer this question when challenged. There will be negative reasons – why the old or existing system is inadequate, but there must be positive reasons – why the new system is better. Stochastic Democracy provides answers to positive questions by

introducing methods and practices that fulfill the promise of democracy. Democracy does not have an unblemished record. Indeed, in 1941, many countries on Earth had turned to authoritarianism, including Austria, Bulgaria, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Poland, Portugal, Spain, and Romania. In the book *Inventing Freedom*, author D. Hannan describes this period of history:

“No one in the 1930s saw democracy as a coming force. On the contrary, it had been outstet from state after state. Fascists and communists used remarkably similar language when they talked of parliamentary regimes. The old democratic-capitalist order was almost always described as ‘rotten’ or ‘decadent’” [Hannan].

A famous quote from that era was delivered by British statesman W. Churchill in 1947, two years after concluding his tenure as Prime Minister:

“Many forms of Government have been tried, and will be tried in this world of sin and woe. No one pretends that democracy is perfect or all-wise. Indeed, it has been said that democracy is the worst form of Government except for all those other forms that have been tried from time to time...”

Democracy as an ideal was practiced for almost two centuries by the city-state of Athens, Greece (population 140,000) circa 500 BCE. There are many valuable practices and lessons relevant to Stochastic Democracy, especially the use of selection by lot. Modern-day democracies follow a variety of implementations with varying degrees of success. By some measures, the form of democracy practiced in Switzerland (population 8.9 M) is among the best (see, e.g., <https://freedomhouse.org> for 2021). A vital feature of Swiss democracy is the use of referenda, a key tool of “direct” democracy. A referendum is an issue presented to citizens, every one of whom can cast a vote to accept or reject. This practice is also included in Stochastic Democracy.

Creating a new form of government will be arduous and require many participants, all working for a common goal. Communicating the potential benefits is vital in order to answer objectors, and to provide clear motivation to everyone affected. Naïve answers will be quickly challenged. The interactive resources available from Gapminder [gapminder] enable fast and easy graphical responses to address questions such as: How do income and democracy affect citizen happiness? Or, an objector can study democracy versus tax rates [Freedom House, World Population Review, respectively] to learn that countries with the greatest freedom and civil rights records tend to tax income at rates higher than 50 percent. They can also find that