

INSTITUTIONAL EVOLUTION IN THE ICELANDIC COMMONWEALTH*

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The conventional explanation of the rise of social order in medieval Iceland, the so-called Commonwealth period, is constructivist in nature. In light of medieval legal thought, the explanation is unconvincing. The story of the decline of that social order is also problematic, in that no integrated theory seems to lie behind the explanation. By applying cooperation and rent-seeking theories to the historical record an attempt is made to provide an explanation that is more convincing, integrated and spontaneous in nature. Two main questions are posed; first, how did the Commonwealth emerge, and, second, why did it break down.

Introduction

The *Icelandic Commonwealth* (930-1264 AD) is interesting in many respects. Mainly, it is interesting in that those, who settled on the uninhabited island, seem to have solved their "Hobbesian problem" of the war of all against all without a central enforcement agency.¹ A decentralized institutional structure based on law evolved in medieval Iceland and it lasted for some three centuries before collapsing through in-fighting. The emergence and decline of the social order in the Commonwealth is therefore a worthy area of research.

Miller (1990), Byock (1982; 1988), and Friedman (1979) have recently examined aspects of medieval Icelandic history. Friedman deals with the effectiveness of private enforcement of law, Byock mainly with the feud in the *Icelandic Sagas* and Miller, similarly, with methods of dispute resolution in the Commonwealth. Miller and Byock also

*I would like to thank Richard Posner, Thráinn Eggertsson, Viktor Vanberg, James Buchanan, Richard Wagner, Leonard Liggio, Sigur ur Lindal, Ragnar Arnason, Anna Agnarsdóttir and an anonymous referee for suggestions and comments.

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¹ As Miller (1990: 307) says: "Those people committed to the rule of law will have to find in medieval Iceland an interesting limiting case. The often unquestioned assumptions that law depends on the state either for its existence or for its efficacy might have to be justified more fully. In any event, theoretical musings on the origins of the law and the state of nature might benefit from knowledge of this remarkable instance of social and legal form in the absence of a coercive state."

describe the general social structure and history of medieval Iceland. My focus is rather different. I use theories of modern political economy to explain the emergence, performance, and decline of the institutional structure of the Icelandic Commonwealth. I examine first the settlement of Iceland, showing how the institutions and rules that defined the Commonwealth emerged and then consider the decline and fall of that social order.

There are basically two theories on how the institutional structure arose. The first builds on the account given by Ari Þorgilsson in *Íslendingabók* (*The Book of Icelanders*, written about 1120). Ari claims that the *Alþing* (the Icelandic general assembly) was formed at *þingvellir* in 930. He further claims, that the leaders of a local assembly, the *Kjalarnesþing*, initiated the establishment of the *Alþing*. They, according to the *Íslendingabók*, sent a man named *Úlfjótur* to Norway to adapt the West Norwegian law of *Gulaping*. Upon his return to Iceland, local leaders gathered at *þingvellir* and agreed on a law code, that *Úlfjótur* and another man named *þorleifur hinn spaki* (the wise), proposed. At this first gathering of the *Alþing* a Lawspeaker was elected. Interestingly enough, *Úlfjótur* is not named as a lawspeaker, according to the list of lawspeakers found in the *Íslendingabók*, and this fact makes the story less credible.

The early history of the formation of the Commonwealth as told by Ari, in the *Íslendingabók* and by others in the *Landnámabók* has to a large extent gone unchallenged. But, although many historians have tacitly accepted Ari's account at least one legal historian has questioned the story. Línal (1969) concludes that whatever the truth may be it is not what Ari would have us believe. Línal states that the medieval legal tradition, the customary law tradition, would not have allowed such a constructivist creation. He claims that if *Úlfjótur* was actually sent to Norway, then it was only to compare some Icelandic laws to those of the Western regions of Norway but not to copy or learn them. Línal further claims that there are great differences between the oldest Icelandic laws and the oldest *Gulaping* laws, so much that the latter could not have been the model for the former. Línal does not deny that the *Alþing* may have been formed through an organized effort on the part of some chieftains, but suggests that the *Alþing* could only have arisen as a logical continuation of an existing tradition and structure.

I join in Línal's criticism of the standard account of the rise of the institutional structure. I do not claim to formalize Línal's views, but

rather to take his challenge and offer an alternative account of the evolution of the legal order in Iceland. In rejecting the mainstay of the constructivist explanation, which leaves us without a factual account of how the *Alþing* actually emerged, I have no option but to resort to conjectural history. The conjectural history, however, cannot escape establishing some connection to what we know of early medieval Iceland. Several recent contributions to the study of the evolution of cooperation in a state of nature without a central enforcement agency support the paper's theoretical perspective.

The decline and fall of the Commonwealth is a source of controversy. Almost all ask the same question: Why was there a struggle to accumulate *Goðorð* (chieftainships)?² Various explanations have been offered, ranging from efficiency arguments to dreams of kingship. Although these theories are numerous we may classify them into two groups. First, some historians claim that a downward trend in economic activity, an economic decline, is the major cause of the Commonwealth's institutional breakdown. This economic decline initiated a wealth and power struggle that eventually led to an agreement with the kingdom of Norway, to uphold the law and secure trade. This explanation has not only questionable factual support but, furthermore, if an economic decline did occur then it was likely an effect of the wealth and power struggle, not its cause. The second group, stresses the wealth and power struggle as the major factor in causing the decline. The main difference between the two lies in the emphasis each theory places on certain facts and conjectures. For the "economic decline" explanation the fundamental cause of the Commonwealth's decline is the downward trend in the terms of trade, the lack of ships, and an adverse climatic change.³ For the "wealth and power" explanation, the first cause is the introduction of a *Tithe*-tax. I accept the main thrust of the latter explanation. However, I contend that this "wealth and power" theory needs to be made much more explicit and provide a more logical story. I use rent-seeking theory from the public choice literature to offer a more fruitful and logical account of the Commonwealth's decline.

² The chieftains played a key role in the governing structure of the Commonwealth (see section II).

³ For an analysis of the major flaws in this alternative theory, see Solvason (1991: 137-145).

I. Theory of the Evolution of Institutions

In explaining how cooperation might have evolved in Iceland it is useful to use game-theoretical analogies. In so doing we may try to determine what the choice situational payoffs are to the respective players in the game. Two classes of games come to mind; coordination games and prisoner's dilemma games. The payoffs in the former are such that the only rational choices available to the participants result in what we may call a "cooperative" solution to the game. But in the prisoner's dilemma games (PD-games), when other players cooperate, any single player does best by defecting.

To clarify the theoretical argument I follow Vanberg and Buchanan (1990: 176-80) who make a distinction between "action interest" and "constitutional interest." The two types of interest do not conflict, but, rather allow one to differentiate between two levels of choice. The constitutional interest is what an individual considers his best interest as a member of a group in general, while action interest is what the individual considers his best interest in a particular situation. The emergence of cooperation is hindered if the two interests do not converge. In coordination problems, these interests do converge, as there are no incentives to drive them apart. For PD-type problems, however, there is a problem of convergence. An individual may prefer a rule for the whole group, such as a rule intended to provide a public good, but, then in a particular situation he may be better off if he consumes the good without paying his share. However, if there are recurrent PD-games, players can punish (use reciprocity) on the following turn. These are the basic results of Axelrod (1984) and they suggest that cooperation can evolve without a central enforcement agency.⁴

For cooperation to spread, only two people need to start cooperating. However, defectors interacting at random with cooperators limit the spread of cooperation. This is the large number problem. As long as the group is small, there is no opportunity for a defector to interact at random with other members of the group. But after the group has grown to a certain size, the opportunity for defection presents itself. Small cooperative-groups or clusters would therefore predominate, if large numbers of actors are present.

⁴ For further analysis, see Solvason (1991; 1992).

There are, however, not only two types of game problems, the coordination and the PD types, but PD-games actually include two different sets of rules. These two PD-type rules are trust-rules, like "respect property," and solidarity-rules, like "pay your fair contribution to joint endeavors." The latter are not targeted to particular individuals or groups, as are the former (Vanberg and Buchanan 1990: 185). In other words, compliance with trust-rules provides benefits only for participants. By contrast, compliance with solidarity-rules generates benefits both for participating actors and non-participating ones.

Therefore, trust-rule groups can grow as large as reciprocity allows. An individual only has to discriminate between cooperators and defectors. Furthermore, the individual has an incentive to cooperate, since others have the capacity to remember his previous behavior. In trust-rule situations, he would not want to be defected against, since that makes him miss out on benefits. In contrast, for solidarity-rules he does not have this incentive, because these rules are like genuine non-excludable public goods. He benefits whether he cooperates or not, and is possibly better off by defecting (if the cooperative choice has a cost to it).

However, since two individuals can cooperate and become better off, why could not two groups do so? Vanberg and Buchanan (1990: 188-191) suggest that such "second-order" clustering solves problems of intergroup cooperation. If there are recurrent dealings between individuals from different groups, then the same solution should emerge here as in the original case. Two individuals from two different groups, begin cooperating: then this second-order cooperation spreads. Groups could have not only first-order boundaries, but also, different second-order boundaries. At the first-order level the group is bounded by the "optimal number" for cooperative clusters, the optimal number being determined by the range of the solidarity-rules. At the second level, a different group emerges, incorporating members from more than one group. If this secondary clustering works, then there should be nothing preventing a third order clustering also. In this way a hierarchy of groups could emerge without the help of any central enforcement agency.

This description is analogous to Robert Nozick's (1974) argument that an invisible-hand mechanism will give rise to a state or a federation of states in any orderly stateless society. Nozick postulates that in the state-of-nature entrepreneurs, observing violations of individual rights, offer to provide protection to victims and bystanders and, establish

Protective Associations (PA's). The PA's need not limit their services to offering only protection, but may also offer comprehensive legal and judicial services. At the outset, therefore, we may see many competing PA's, offering differing forms of protection and judicial services. Since the wronged and the wrongdoers may belong to competing PA's a tendency of territorial dominance of PA's may develop, resulting in the formation of a Dominant Protective Association (DPA). Nozick claims that the DPA is a natural monopoly and it does appear that if a PA has gained a territorial advantage in membership then it would be harder for other PA's to compete with it in price. There are economies of scale in the provision of protective services. On the demand side, it appears that the larger the DPA, the more valuable its services are. A DPA may therefore have a comparative advantage over competing PA's.⁵

However, a problem for the DPA may emerge. As a DPA in a given area grows larger, there emerges an optimum point at which non-joining individuals may find it more beneficial to remain non-aligned than paying fees to the DPA. Offering services to these individuals free-of-charge would result in an inefficient maximizing solution for the DPA. This inefficiency could be removed if the DPA offered tied goods to its clients (Mumy 1987). However, as Klein (1987) has argued, this solution is available only on a qualified basis. First, the tied good must complement rather than be a substitute for the protective services offered. Secondly, the public good offered must be a non-rival good, and yet excludable to non-members. The members would consume the public good together and non-members could not consume it. Thirdly, the two goods must be offered together, i.e. be tied. An individual wanting to buy protective services also has to buy the public good. Since the DPA has a cost advantage in providing protective services the DPA can tie in the public good such that individuals buying both goods

5 Although Nozick's theory is analogous to my explanation of the rise of states in the Icelandic Commonwealth, this is a mere analogy. Nozick begins his analysis in a Lockean state-of-nature with no or hardly any institutional structures, and his solution emerges from that state. In the Icelandic "state-of-nature" some institutional structures were already in place. In Iceland after 930 a shared monopoly already existed by law. It is therefore easier for states to emerge in my analysis than in Nozick's and it should be easier to maintain them. Nozick assumes that DPA's are natural monopolies or have cost advantages. In my analysis this assumption is not necessary because of the legal restriction on the number of chieftains.

together pay less than they would pay if the goods were bought separately.⁶ At the same time it is more profitable for the DPA to offer both goods together, since it thereby overcomes the free-rider problem and therefore extracts *rents* from its members.

This *rent-seeking* may be defined as expenditure of scarce resources to capture a pure transfer.⁷ But the rent-seeking can also be seen as a two-stage game or process. The first stage is the creation of artificial barriers in the market, i.e. the creation of a non-market out of a market. Individuals at this stage try to control the political apparatus that creates, assigns, and enforces rent flows. The second-stage of rent-seeking occurs with the competition for rents in particular instances. Tollison (1987: 153) defines this second-stage as "rent-seeking behavior" in "the competition to capture the rents that inhere in particular instances of monopoly and regulation." Here, in non-market situations with artificial barriers already in place, individuals compete to get rents or positions in the rent flow. The two stages of rent-seeking are equally important. In the first stage, institutions evolve or are created to ensure rent flows, while in the second stage individuals and groups compete for the rents, undermining the institutional structure.

II. Cooperative Institutions in Iceland

The settlement of Iceland began about 870 AD, and during the next sixty years about 30,000 people settled there.⁸ Since Iceland was uninhabited when the first settlers arrived, they could settle anywhere they pleased. According to the *Landnámabók* (*The Book of the Settlement of Iceland*, written about 1120) some of the earliest settlers claimed tracts of land so large that they could not put it all to use. Some areas may have been fully cultivated by 930, but some of the land settled may have been uninhabitable. Therefore, a need to resettle may have arisen, causing problems. According to the *Landnámabók*, conflicts arose concerning land claims. Local *þings*, which served as assemblies and courts, must have emerged early to handle such conflicts.

6 This, of course, assumes that the public good to be tied is in great demand and that the DPA can offer the public good competitively, i.e. at the same costs as others could.

7 For an explanation of the difference between rent-seeking and profit-seeking, see Buchanan (1987).

8 Population estimates vary, but see Jóhannesson (1974: 46-49).

I conjecture that the first assemblies were presided over by a single leader, a chieftain.⁹ These early assemblies were likely very informal gatherings at first. None the less, they initiated the more formal and encompassing institutions that later evolved. The sources on this matter are ambiguous, but the way a chieftain established his following supports the view that the chieftains were originally arbitrators. This can be seen in that each farmer could pick a chieftain to follow; the farmer chose his arbitrator. After the establishment of certain of these chieftainships, their numbers became fixed by law. Each farmer could still pick a chieftain to follow, but his choices were now limited by the number of chieftains.¹⁰

Another institution, the *Hreppur*, seems to have developed early in Icelandic history, probably in the settlement period or the 10th century. According to the law-book, the *Grágás* (*Laws of Early Iceland*, written in the 12th and 13th centuries) the *Hreppur* was composed of a minimum of twenty farms. Each *Hreppur* also had a five member directory board. Among other duties, each *Hreppur* was responsible for seeing that orphans and the poor within its area were fed and housed. It did this by assigning these persons to member farms, which took turns in providing for them. The *Hreppur* also served as a property insurance agency. It assisted in case of destruction wrought by fire and diseases of livestock. The *Hreppur* also had a rule that no one could move into the *Hreppur* unless he had the recommendation of another such unit (see Jóhannesson 1974: 103-109). Finally, the *Hreppur* organized and controlled summer grazing lands in cooperation with the members.

⁹ Actually, there is no evidence as to how the first assemblies formed in Iceland. In fact, the sources do not say which year the *Alþing* was formed, but historians have estimated its formation at 930. A logical sequence, as mine hopefully is, would postulate that a local assembly arose first around a single chieftain and then only later the local-*þings*, the *Vorþings*, would have arisen. This would seem more sequential than the *Vorþings* arising right away. The only historical evidence on these pre-*Alþing* assemblies mentions the existence of two *Vorþings*, but tells us nothing of their origin or procedures. Historians have not really addressed this issue, but instead rather tried to retell us what the sources tell us. Lárusson (1932: 16) is an exception; he assumes that local assemblies arose around each chieftain at first.

¹⁰ The origin of the chieftainship is disputed. The *Goði* (Icelandic for chieftain) seems to be derived from *Goð*, or God in English. There have been suggestions that this refers to the chieftain role as keeper of the temple (heathendom). According to Jóhannesson (1974) this probably is the correct origin of the term, but is not necessarily descriptive of their functions.

These institutions, the *þings* and the *Hreppur*, show clearly how "cooperative clusters" developed in medieval Iceland. Both institutions arose at the same time, fairly shortly after the first settlers arrived. This can in part be explained by the fact that the settlers were familiar with the assembly tradition. But since the settlers had different traditions what emerged was different from these previous traditions. The local-*þings* were less kinship-oriented in Iceland than in other places, and the *Hreppur* was a new development, not known elsewhere.

That these institutions did not span the whole country supports the criticism of Axelrod's theory based on the large-number problem. At some number of people it becomes more beneficial for group members to defect rather than cooperate. What developed in Iceland was a number of each type of institution; many local-*þings* and many more *Hreppur*.

The two types of institutions also support the distinction made between trust-rules and solidarity-rules. The *þing* functioned as a cluster for market activities, such as trade, and as an arbitrator for two-person dealings. These correspond to problems with trust-rules, and fit the prediction that these rules are essentially for market-type orders. The *Hreppur* was as a cluster for common concerns, such as the need for private and social insurance. It corresponds to problems with solidarity-rules, and fulfils the more general prediction that such rules apply to organization type orders. It is also noteworthy that the *Hreppur* defines the relevant membership group before producing any benefits. This is essential for solidarity-rules groups to be able to emerge (Vanberg and Buchanan 1990: 185).

These two institutions also overlapped in membership. The *Hreppur* was geographical in jurisdiction, while the *þing* was not. Once a farm had joined a given *Hreppur*, its affiliation could not be changed. The farmer, on the other hand, could change his alliance to another chieftain, and therefore another *þing*. These two institutions also fit the large-number distinction that was made above, in that each *Hreppur* had fewer members than each local-*þing*.¹¹

¹¹ The actual number of *Hreppur* in the settlement period is unknown. Jóhannesson (1974: 103) states that in 1703 they were 162, and claims that it is reasonable to assume that there were about the same number in the 10th century. The number of *Goðar* (chieftains) was 36, before 960, and 39, after 960. The number of local-*þings* after 960 was 13. If these figures are correct, then it follows that the *Hreppur* had fewer members than the *þing*, as predicted by the theory.

Although there is no reason to think that the *þings* and the *Hreppar* did not work fairly well in resolving intragroup conflict, conflicts would be expected between members of different *þings*. It is likely that there were a number of these conflicts, since the local-*þings* were not strictly geographical.

What emerged in Iceland to handle such conflicts was an enlargement of the local assembly. This was the *Vorþing*, an assembly made up of three chieftains and their followers. This *þing* also acted as a court. The *Vorþing* assembled twice each year, in the spring and in the fall. The Spring assembly was divided into two assemblies. The first, the *Sóknarþing*, served as a regular court, and the second, the *Skuldþing*, served as a place to settle debts. The Fall assembly, the *Leiðir*, announced to the locals what had happened at the *Alþing*. Another institution, the Quarter-*þing*, or *Fjórðungsping*, was established about the same time. The Quarter-*þing* was comprised of nine chieftains and their followers, and like the other *þings*, served as a court. The dates of the formation of these are not known, but references in the *Sagas* to *þings* date the emergence of some forms of these lower level courts before 930.

What matters is that an institutional structure within which intergroup conflicts were handled did appear. At the lowest level of the structure an assembly formed around a single chieftain and the *Hreppur* formed around a single locality. These handled problems of intragroup cooperation and allowed also for some intergroup cooperation. Next *Vorþings* and *Fjórðungspings* formed to establish better intergroup cooperation as the relevant groups got larger. Although the enlarged court system had jurisdiction over more settlers, it still did not connect all settlers or groups. Therefore, we should still expect intergroup conflicts to arise and not be solved immediately. Followers of different chieftains belonging to different *Vorþings* or *Fjórðungspings* could come into conflict; there was as yet no institution to handle these problems.

The next step in the development of the institutional structure was the formation of the *Alþing*. With this development the country began to unite under one body of law, referred to as *Our Law* (*Vár Lög*). At the same time a court system was being formalized, and procedural rules, or a constitution, were established. The functions of the *Alþing* were twofold. First, it served as a Law-Council. Second, it served as the highest court. To serve this function, the court at the *Alþing* was divided into *Fjórðungsdóma*, or Quarter-Courts. These corresponded

to the *Fjórðungspings* at the lower level, but were reestablished at the *Alþing*.

The whole issue concerning the *Fjórðungspings* and the *Fjórðungsdómar* is ambiguous in the sources. The first ambiguity concerns the dates of these formations. Most historians suggest that both of them were established at about the same time. According to Jóhannesson (1956: 68-70) and Benediktsson (1974: 178f.), both institutions were established in the period 955-970. The *Fjórðungspings*, according to this view, were formed one for each geographical quarter, but almost immediately became abandoned or ignored in favor of the *Fjórðungsdómar* at the *Alþing*. It seems to me that this explanation is unconvincing and too constructivist and that a more evolutionary explanation is in order. I conjecture, instead, that the *Fjórðungspings* were informally established sometime before the 960s, but then after some experience with them the change to *Fjórðungsdómar* was initiated about 960-5. I contend therefore that it is only with the *Fjórðungsdómar* that both institutions became formal and the quarters strictly geographical.

The evolution of the institutional structure suggests that there were disputes and problems with violence early on. If only disputes of insignificant scale had occurred then it would seem strange for a legal and court system on a national level to have arisen. It seems safe to assume that there were frequent disputes, especially when settlers sought to claim suitable land for farming. Immediately after the arrival of the first settlers, *Viking* raids may have given rise to a need for local law enforcement. This may explain why the institutional structure arose so quickly. As local communities or chieftainships were organized the *Vikings* may have responded by raiding different communities. Each community then responded by extending its protection to other groups via reciprocity, thus creating the hierarchial institutional structure.

The establishment of the *Fjórðungsdómar* at the *Alþing* to replace the short lived *Fjórðungspings* and, especially, the introduction of the *Fimmtardómur*, in 1005, suggests that problems of law enforcement continued. The latter institution seems to have been introduced because the previous system occasionally failed to resolve cases brought before them. Since super-majorities of jurors were required for decisions at lower level courts, a change to a simple majority requirement seems to have been needed to overcome unresolved cases. But, for whatever reason, there must have been significant numbers of unresolved disputes or the introduction of the Fifth Court (*Fimmtardómur*) would not

have been necessary. In the Fifth-Court a simple majority was required for a decision.

The evolution of secondary clusters emerged, roughly as the theory predicts: First, we have the individual chieftain group, and the *Hreppur*. On top of these the local assemblies and then the Quarter-*þings* evolved. Finally, the *Alþing* interconnects all groups. After the formation of the *Alþing*, or, rather, in the early 11th century, the court system therefore had three levels.

The unofficial replacement of *Fjórðungþings* by *Fjórðungsdómar* not only suggests a number of major disputes, but also that the system required different institutional arrangements to achieve a balance of powers. This was in part achieved simply by moving these courts to the *Alþing* site, so that cases could be resolved in a neutral setting. At the same time, though, the boundaries of the quarters were changed to correspond to geographical boundaries. A farmer living within one quarter was required to choose one of nine chieftains living in the same quarter (one of twelve in the North). Also at this time, a local-*þing* was added in the Northern Quarter. From the 960s onwards there were 13 local-*þings* in the Commonwealth and 39 full chieftains presiding over them. To counter resultant imbalances in the numbers of chieftains the *Alþing*, nine "chieftainships" were created. These chieftains (chosen each year by the others) only sat at the Law Council and did not preside over local-*þings*.

The addition of three new *Goðar* in the Northern quarter is puzzling. Some, such as Byock (1988: 66), explain this change as having been made for geographical reasons. Because of the size of the Northern quarter and distances, one additional local-*þing* was added in the quarter. Although there may be something to this, other factors were more compelling. If geography lay behind this change then it seems that local-*þings* would also have been added in some of the other quarters. The Western quarter is where travelling was the hardest and the Eastern quarter has the longest distances. The growth of the population or the number of farmers in the quarters probably had more to do with the addition of *Goðar* in the Northern quarter.

Although no quarter-by-quarter population estimates are available for the tenth or early eleventh centuries, the population count of 1096 is considered fairly accurate by most historians. The number of tax-paying farmers in those years were the following: 1200 in the Southern, 1080 in the Western, 840 in the Eastern, and 1440 in the Northern

quarter (see Sigurðsson 1989: 129). If these figures are reliable, they show that at the dawn of the eleventh century the Northern quarter would have been the most populous by far. The increase in local-*þings* in the Northern quarter is therefore most likely due to growth in the population. Balancing of numbers is the most plausible cause for the addition of the new local-*þing* and the geographical restrictions of the quarters.

The unequal number of *Goðar* in the quarters after 965 also supports the contention that the *Fjórðungþings* had been informal or irregular gatherings before that time. It is only when the formalization is attempted and when the *Fjórðungsdómar* formed that disputes arise concerning the balance of power. From this it seems that the *Fjórðungþings* may have become somewhat more or better accepted in all areas except the North.¹²

The legal and judicial structure that evolved in the Commonwealth can therefore be thought of as a balanced system. Each chieftain has approximately equal number of *þingmenn* and each local-*þing* is attended by an approximately equal number of people. Hierarchically the system is also numerically balanced, except at the *Alþing*, where some quarters had larger representation of *þingmenn* than others.¹³ On the other hand, the power of the Northern chieftains at the *Alþing* was exactly equal to that of chieftains from any other quarter. The chieftains, whether nine or twelve, from each quarter could only control a quarter of all institutions at the *Alþing*. It was not apparently too problematic that the Northern Quarter had the most numerous delegation of *þingmenn* at the *Alþing*.

One problem for the theory of cooperation arising in relation to the large-number problem, is that of the transmission of information about rules and defectors. As long as the cooperative groups are small, persons have little problem in acquiring the relevant information about defectors. The larger the group, however, the harder it becomes for people to acquire this information. An especially acute problem arises when there are numerous groups, namely that of identifying defectors from other groups. Also, some sort of information-relaying mechanism

¹² But, see also Jóhannesson (1956: 70-1).

¹³ Ingvarsson (1986: 132) for example, claims that a chieftain would ask that every ninth of his *þingmenn* accompany him to the *Alþing*.

is necessary to inform people as to what the rules or laws are. Apparently, institutional devices are required to cope with these problems.

In Iceland the *Leiðir* served these purposes. All freemen attended such gatherings in their locality to get news about what had happened at the *Alþing*. The announcements there identified defectors from all groups and clarified the law. Defectors from other groups could also be identified through the sponsorship function of the *Hreppur*. In order for anyone to settle in a new community, he was required to provide references. Presumably these references were both recommendations and served as some form of status identity.

Another question that deserves attention is that of how defections are to be dealt with. There are two types of defections, deliberate and unintended. The first does not pose much of a problem, since presumably cooperators would want to rid the group of intentional defectors and would be unconcerned as to what became of them.¹⁴ The second poses a problem, since if someone did defect by mistake, the group might prefer "forgiving" the person to permanently cutting him off. The problem that emerges here can not be answered by Axelrod's tournament, because we now want to consider the defector's intentions instead of only his actual behaviour.¹⁵ With a TIT-FOR-TAT strategy the defector would only be punished once, if he resumed cooperative behaviour immediately after the mistaken defection. But if the defecting actor now by mistake responds to the punishment by defecting again, we have the possibility of a breakdown. If communication between actors is allowed, the defector could admit his mistake and offer reimbursement, and cooperation should be able to resume.

How were defections handled in medieval Iceland? Before turning to this question, a digression on the system of law is warranted. The

14 A strategy of GRIM, which starts on a cooperative move but defects on every move once the opposing player has defected once, is descriptive of this behavior. Linstér (1992) has shown that GRIM can be more successful than TIT-FOR-TAT. Vanberg and Congleton (1992) suggest that a more realistic and proper way to approach the "cooperation problem" from an Axelrod-type perspective is to define the situation as a PD-game with an exit option (PDE). They show that in a PDE-game a strategy of "prudent morality" may actually do better than a strategy of TIT-FOR-TAT. Prudent morality uses the "exit-option" against defectors instead of "punishment" as TIT-FOR-TAT would use.

15 A strategy of TIT FOR TWO TATS, which starts on a cooperative move and only defects after the opponent has defected twice, possibly has some relevance here, see Axelrod (1984).

law of the Commonwealth was Customary Law, as was all laws of that era. Customary Law is a living law that is rich in details rather than in principles. The law is perceived as old, the older the better, although this does not exclude the possibility of the law's changing. Change, however, is seen as the rectification of older law rather than as the creation of law. To confirm his recitation of the inherited law, the Lawspeaker required simple majority in the *Lögrétta*.¹⁶ But Lindal (1984) claims that all chieftains had to agree unanimously to the amendment of a law. It is therefore essential that the people in a community governed by customary law agree on what the law is, since the motives of the accused were not considered when juries decided the guilt of defendants.

All penalty was either in the form of restitution or fines. Enforcement of judgments was private, in that the victim was responsible for enforcing a judgement in his favour.¹⁷ In most cases the law specified when payment of a judgement should take place, and failure to pay on time was itself a criminal offense. To make the system more effective, the payment of a judgment usually required witnesses or consultation with the aggressor's chieftain, and, in addition, the victim could sell his judgement to someone stronger than himself. According to Miller (1984: 99), despite having "had a complex court structure, most disputes did not lead to adjudicated outcomes." In customary legal systems, this preference for compromise is widespread.

The law established specific and detailed instructions as to the proper punishment of deviant behaviour. Restitution, or *Útlegð*, was used for lesser offenses, while fines were demanded in more serious cases. Fines, or *Sekt*, were either sentences of lesser outlawry, *Fjörbaugsgarður*, or greater outlawry, *Skóggangur*.¹⁸ A person sentenced to lesser outlawry was required to leave the country, the protection of Our Law,

16 *Lögrétta*, literally means "law rectifying". That the name has significant meaning has been argued by Lindal (1984).

17 For details on the dispute resolution, case studies and the law, see Miller (1990), Byock (1988), and Friedman (1979). To economists the analysis of Miller and Byock may seem theoretically shallow. Friedman offers an economist's perspective, as do Posner (1981) and Benson (1990).

18 It should be noted that some Icelandic legal concepts had different meaning in the Commonwealth than they did in later times. The concept *sekt*, for example, which may be translated to English as either *guilt* or *a fine*, really had the former meaning in the Commonwealth. When, therefore, I refer to a fine I am really referring to the older meaning of *guilt*. Guilt, i.e. *a fine*, was associated with two forms of outlawry, lesser and greater. The Icelandic word *útlegð*, is another example, which literally translates

for three years. Someone sentenced to greater outlawry was to leave the country permanently, and could be rightfully killed after three months. Both types of outlaws lost their property, which was distributed by the *Féránsdómur*. Only the guilty person's property, not that of his wife or other family members, could be confiscated, as long as the family member could show legitimate ownership. In general, the lesser the offense, the lesser the penalty. Payment of money or livestock was usually required. But the more serious the offense, the more likely a form of outlawry would be required. District outlawry was the punishment for offenses against a community as a whole. Next was lesser outlawry, or *Fjörbaugsgarður*, and the highest penalty was that of full outlawry, or *Skóggangur*.

For lesser outlawry, all property belonging to the aggressor except his land was confiscated by the *Féránsdómur*. The exclusion of land of the lesser outlaw from confiscation, was intended to allow the aggressor to be readmitted as a full citizen at the end of the three years. All of a full outlaw's property was confiscated, since he was not expected to return. Even a full outlaw could be readmitted into the protection of Our Law. To be readmitted the outlaw had to declare before witnesses that he would kill three other full outlaws, and then be able to prove he had done so. Succeeding in this, he was readmitted.

Violations for which outlawry was the penalty were both private and public offenses. The private element of the offence was dealt with through confiscation; public offence was dealt with by the penalty of outlawry. The public element of the offence was the violation of Our Law. This is illustrated by the obligation of the plaintiff to execute a full outlaw brought before him; the plaintiff who refused faced the possibility of being outlawed himself for threatening Our Law. This is clearly an example of what Axelrod (1986) calls a metanorm.

III. Rent-Seeking and the Rise of the State

With the establishment of the *Alþing* and *Vár Lög* the *Goði-þingmann* relationship is incorporated into the institutional structure. The law required that all farmers align themselves with a chieftain. According to the *Grágás* the farmer had a right to follow the chieftain of his choice.

into English as *outlawry*, but did not have that meaning in the Commonwealth. *Útleið* in the Commonwealth referred to a monetary fine, a form of restitution.

Once a year the farmer could switch his allegiance from one chieftain to another.¹⁹ Why would a farmer need this choice?

First, his current chieftain might be doing a poor job of keeping the peace. There were several potential reasons for ineffective peacekeeping: The chieftain may have been a colourless leader, such that his threats or enforcement were unconvincing, or he might lack wealth, unable to reimburse his followers for their participation in the enforcement of judgements. Secondly, the farmer might need such a choice if his current chieftain was a poor representative for any of the above mentioned reasons. Third, there might be a conflict of interest between the chieftain and the farmer. For example, they might sue each other. Finally, the chieftain may have been weak either in wealth or following as compared to surrounding chieftains.

But why would the chieftain care whether he lost followers or not? Surely the right to sit in the *Lögrétta* did not depend on whether the chieftain had any followers or not. Did the chieftain's rights at the local-*þings* or quarter-*þings* depend on this?

Although the chieftains, even those without followers, could use their voting rights, they needed followers from which to appoint jurors. A chieftain without followers could not appoint members to the jury, unless he could happily rely on followers of other chieftains. In many, or even most, cases this may not have been of any consequence to the chieftain. But if he himself was involved in a lawsuit he would surely prefer some of his own followers to be on that jury, rather than only the followers of other chieftains. Furthermore, if the chieftain had any followers at all he would have preferred to have more of them rather than less, since the more numerous his *þingmenn*, the better his ability to enforce judgements.²⁰ Under the institutional structure of the Commonwealth, and described in the laws of *Grágás*, the chieftains and farmers needed each others support.

19 The farmer in aligning himself with a chieftain became the chieftain's *þingmaður* (or *þingmann*). In becoming a *þingmaður* the farmer was obliged to attend *þings* with his chieftain, if requested, and contribute to payments of the *þingfararþing* (a lump sum tax on each *þingmann*). *þingfararþing* was paid to those *þingmenn* who the chieftain had chosen to attend the *Alþing* with him. The revenue for the *þingfararþing* was raised by having the other, non-attending, *þingmenn* pay a *þingmann*-fee.

20 This is not to say that there may not have been some optimal number of followers, after which any increase in their number had decreasing or even negative returns. Such factors as the level of personal connection and wealth may have bound the optimal number.

Although the number of a chieftain's *þingmenn* may have been determined by the revenue/cost ratio and the extent to which the level of personal connection could be retained, the scope of the chieftain was determined differently. The scope of the chieftain was determined by the size of the area in which most, if not all, of the chieftain's followers lived. This was determined in turn to some extent by the ease or difficulty of travelling to the chieftain. The *Sagas* provide another clue to how such scope became determined in the pre-Christian era. The *Goðar* were owners of temples and people in the surrounding area would seek to carry on their religious activities in these temples. There may have been a connection between which chieftain a farmer chose and the temple he chose to attend. The chieftains may not have been the only ones to have kept temples, since it is unlikely that 36 temples would satisfy the religious needs of a population in excess of 30,000, and increasing. But even if some of the wealthier farmers also built temples, these farmers in turn were aligned to chieftains of their choice. Thus, as Jóhannesson (1974: 227) suggests, temple associations may have aligned certain farmers with particular chieftains.

Owners of temples may have received revenues, a temple-fee, from the farmers that attended their temples.²¹ The fee may have been there mainly to reimburse the owner for building and service expenditures. The amount of this fee may also have determined the size of the temple's following. Thus, the fee may have affected the farmer's choice of both a chieftain and a temple. All this, of course, does not exclude the possibility that a farmer could choose a chieftain whose temple he did not attend. Occasionally a farmer may even have chosen a chieftain living quite far away. Other factors may have entered into these decisions, such as previous residence, family ties and intermarriage links.

²¹ Whether there actually was a temple-tax or not, one thing seems clear and that is that owners of temples would have requested the attending farmers to contribute to the temple somehow. The chieftains would have been in an advantageous position to require "voluntary" contributions, or else would not represent their non-contributing followers equally. Whether they did so through a tax or through voluntary contributions is of no major significance. I contend that whether there was a temple-tax or not some form of revenue was needed for the church owners. If revenue was gathered by temple owners in the heathendom period then this must have been continued in the Christendom period, before the Tithes, since otherwise why would the heathen temple owners have accepted the new religion? Jóhannesson (1974: 169) supports this view.

This connection between the temple attendance and chieftain membership may have influenced the zeal with which a chieftain would represent his farmers. If a particular farmer chose chieftain A but continued to attend chieftain's B temple and thereby pay temple-fees to B, A may have had less of an incentive to represent this farmer to the best of his ability than he would have if the farmer paid him fees. Thus, the chieftains may have seen an advantage in offering tied goods. The chieftain could also have claimed a share of the farmers award of damages or in his property, if award was won as a condition of representation, but, furthermore the chieftain could have insisted that the farmer belong to the chieftain's temple in order for the chieftain to take the case. This would be especially true of chieftains who had already built their reputation and following. New chieftains, who had newly acquired a chieftainship through inheritance, sale or gift, might find the tie-in worked to their disadvantage. The new chieftains often needed to establish a reputation to hold on to his *þingmenn* and to attract new ones. They may therefore have had to offer their services at lower costs, i.e. without tie-ins.

In restricting the chieftains within certain geographical boundaries, the island was divided into quarters and the farmers within each quarter were required to choose a chieftain within their quarter. This restriction, it seems, was ignored, especially later in the Commonwealth.²² By the year 1000, when Christianity was accepted, the institutional structure in place was founded on the reciprocal relationship between the chieftains and their *þingmenn*. Instead of temples, churches were built. The owners of churches, which were privately operated, must have insisted on charging a fee to reimburse them for church related costs. The tie-in sales of the chieftain services would therefore continue after the acceptance of Christianity.

The institutional apparatus of the Commonwealth was therefore based on a reciprocal relation between the *Goði* and his *þingmenn*. The farmers were not only required by law to align themselves with a chieftain but, further, it was necessary for the farmers to align themselves with a chieftain in order to have a voice and representation in legal and judicial matters. The chieftains had a strong incentive to

²² A partial explanation is found in the authority of the *Lögrétta* to issue exceptions from this geographical requirement, i.e. the *Lögrétta* could agree to let a farmer choose a chieftain from outside their quarter.

represent as many farmers as possible, for otherwise his chieftainship was almost useless and the chieftain's own status weak. The whole institutional structure emerged as a hierarchial structure of reciprocal relationships. The explanation for the Commonwealth's decline and fall must be found in a tendency contrary to reciprocity, that must have emerged in the chieftain-farmer relation.

Although the farmer was supposed to enter into this relationship voluntarily, in reality the farmer's choice was restricted. Because of the position of the chieftain as an owner of a church the chieftains may have been able to limit the farmers' range of choice of allegiance. Furthermore, the chieftain's position was slowly but firmly becoming strong enough for him to extract rents from the farmer by selling tied goods. The chieftains may also have demanded a large proportion of the damages awarded to farmers and portions of the farmer's property in return for representing the farmers in law-suits and in the enforcement of judgements.

A question still remains, though, as to why competition between chieftains did not erode the constraints chieftains imposed on the farmer's range of choice of representative. Two co-determinant factors were significant in the 10th and 11th centuries. First, at the outset the chiefdoms and chieftain's delegations were probably of almost equal size. Secondly, because of their sale of tied goods the chieftains may have been able to gain a local monopoly status. Thus, the chieftain's advantage would be hard to overcome. Farmers switching their allegiance probably had little or no effect on the local monopolies. Seemingly, the only way to overcome the chieftain's advantage would be an organized effort on the part of the farmers, with the cooperation of at least one chieftain.²³ Such conspiracies apparently did not materialize. Instead, other factors affecting the wealth status of the chieftains eventually overcame this dilemma. Aside from acquiring income and wealth from the farmers, the chieftains themselves engaged in farming and in trade. Although the chieftains differential success in farming and trade produced some inequality among them, the share each received of taxes

23 Another factor concerning the workability is the matter of distances. Iceland is about 40,000 miles² in size and, therefore, each of the 39 chieftains had about 1,000 sq. miles in territory. More important though, is the fact that the farmers were scattered around most of this area and therefore any organized effort against the chieftains would have been even harder to establish.

lead to more inequality.²⁴ The Tithe, established in 1096, became the greatest "investment" or "rent-seeking" opportunity for the chieftains in the 12th century. The Tithe-law, in essence, changed the payoff matrix of the game. The Go ar and the Church realized that it could be profitable to defect against each other; more profitable, if successful, than cooperation.²⁵

The political struggle blamed for the end of the Commonwealth is said to start late in the 11th or early 12th century. At that time the Church had its first Icelandic bishop, Ísleifur, and succeeding him was his son Gizur. Bishop Gizur is not only credited with establishing the Church as an institution, i.e. providing it with a church building along with farm land to provide income, but with providing it with a secure means of future income, taxation. The Church's land and building was at *Skálholt* and later bishops lived there and participated in trade, farm production and teaching in a Church school. In 1096 the *Alþing*, through the advocacy of the bishop and the Lawspeaker, accepted a form of taxation, the Tithe (*Tíund*). The Tithe was a property tax, assessed 1% of the farmer's wealth.²⁶

After collection the tax was divided into four parts; one part was sent to the Church (the bishop), one to the *Hreppur* (for the poor), one to the local church (to reimburse building costs and maintenance), and one to the local priest (his salary). The two latter fourths actually went

24 There is some dispute as to the timing of when the *Goðar* became wealthier. Jóhannesson (1956: 82) claims that the *Goðar* were financially distressed in the 11th and early 12 century, but admits that the introduction of taxation later provided them with revenues. Karlsson (1975: 36-38) emphasizes that the introduction of taxation provided certain families with wealth and power advantages immediately. See also, Karlsson (1972; 1980; 1983).

25 The institutional change can be explained as resulting from changes in relative prices (see North 1981; 1990). Not only had population been expanding, resulting in higher land values, cheaper labor costs and the decline of slavery (see Agnarsdóttir and Árnason 1983), but further the cost of information had decreased with the advent of writing. Writing came to Iceland with the Church and probably only began late in the eleventh century. This change in technology lowered the cost of information, in that property values could now be recorded, for the purpose of taxation. The population increase was not only the result of immigration, but also the result of infanticide being declared illegal with the advent of Christendom.

26 The Tithe can, in a sense, be looked on as a tax on rent, since land was in fixed supply (used almost exclusively for raising sheep) and the stock of sheep was bound by the fixed amount of land available.

to the owner of the church-building, who then provided the church-building and paid the priest. The owners often became priests at their own local churches, until the Church restricted this late in the 12th century.

It is my contention that the acceptance of the Tithe in Iceland is an example of rent-seeking. The Church by proposing the tax secures a steady and guaranteed income for itself, as Pope Gregory had demanded, and in doing so offers the chieftains the same. The Chieftains had previously gotten income from various contributions, such as the church fee, the *þingfararkaup*, legal fees, trade fees, etc., but the Tithe offered them a higher and steadier income. But even if the Church and the chieftains (along with church owning farmers) had an interest in accepting the tax, the tax paying farmers should not have. The historical sources do not clearly describe the original Tithe, i.e. we do not know if the Tithe was originally only a tax on land or if it had a broader impact, as it had later (Stefánsson 1975: 60f.). If the tax was limited in scope to begin with, then the farmers may not have seen much to bother about. Actually, they may have preferred to pay one simple tax instead of various fees.²⁷ The farmers may have accepted even a tax wider in scope for this reason, and because the tax provided a stable structure to provide tax-funded services. The only thing the *Sagas* make clear is that the farmers were anti-tax. The most plausible explanation for the farmer's acceptance of the tax was the farmer's lack of choice, since the chieftains had been gaining the upper hand in their relation with the farmers. By the end of the 11th century, the chieftain's position, taking into account their alliance with the Church and church owning farmers, had gotten so strong that they could interpret or amend the law in any way they wanted, as long as all of them agreed (Karlsson 1972: 55f.; Eggertsson 1990: 310).

The Church and the Chieftains were sure to exempt themselves from the taxation. All properties "given to God" were exempt from taxation and so was the institution of chieftainship. The Church and the chieftains were supposed to pay taxes on other properties, but to a large extent circumvented these rules. The tax-law, for example, exempted

²⁷ It is actually not all that clear whether all the various fees (or contributions) were discontinued with the introduction of the Tithe. It is known that various fees were collected by chieftains and other leaders in the 12th and 13th century. See Sigurðsson (1989) and Ingvarsson (1986: 172–191).

local churches, the *staðir*, from taxation. Owners of local churches went on to declare most of their property as *staðir* and declared their families as guardians of the property. Even the institution of chieftainship was tax-exempt, although chieftainships were marketable commodities.²⁸

The description above corresponds to Tollison's (1987: 153) first-stage of rent-seeking; the "competition to control the political apparatus that creates, enforces, and assigns rent flows." Although the political structure was firmly in place in the Commonwealth before the Tithe was introduced, the introduction of the tax itself restructured these institutions. In essence, the payoff structure of the game changed with the Tithe. Before imposition of the tax, the chieftains were the sole political authority in the country, but after the tax's introduction the Church and wealthier farmers contended with them for this power (Stefánsson 1975). If unanimity among the chieftains was required for the acceptance of the new tax-law, then the Tithe as it was actually accepted, was probably the only possible form of general taxation that could be agreed upon. Some of the Southern chieftains controlled the institution of the Church. These chieftains, by getting the others to accept a portion for the Church, therefore received more revenue than the others. The other chieftains, in turn, had no way of getting a tax accepted without the approval of the Church. A stalemate would likely have resulted, if not for the exemption of all chieftain's from taxation. These exemptions as mentioned above included the local ecclesiastical institutions (*staðir*) and the chieftainship (*goðorð*) itself. Furthermore, in the 12th century Northern chieftains demanded, and got, another bishop for the Northern part of the country. The Northern bishops at *Hólar*, were independent of the ones at *Skálholt*. Since not all *staðir* were owned by chieftains, but, rather, many were owned by wealthy farmers they too could be relied on to support the new tax. It is therefore likely that this coalition of Church, chieftains, and wealthier farmers was so powerful that it did not really matter what the other farmers wanted to accept.

²⁸ The commodity nature of the chieftainship is best illustrated in that it could be traded, given as a gift, inherited, etc. On the other hand though, just buying the chieftainship was no guarantee of power. A chieftain had to be able to convince some farmers to follow him or accept his leadership. In failing to gain following the chieftainship was almost worthless.

The assignment of rents was therefore decided by the tax-law. Now a second-stage of rent-seeking occurred, with competition for rents in particular instances. The second-stage of the rent-seeking occurred when chieftains tried to acquire more sources of revenue within the structure created. In other words, they now spent real resources to capture pure transfers. This took the form of bringing under their control local churches (*staðir*), chieftainships (*goðorð*) and more followers (*þingmenn*). By getting more followers the chieftains made other chieftains comparatively weaker in strength and wealth. As Sigurðsson (1989: 141-2) describes: "The chieftains' economic power base was strengthened by their control of the *staðir*. Riches begot riches. The *goðar* could then 'buy' more farmers, which made it possible for them to expand their economic activities, and thereby establish their standing as *stórgoðar*." To get followers a chieftain had to offer some services in turn for the tax he got from the farmer. Aside from providing church services and aid to his followers, the chieftain distributed gifts. At given levels of revenue, at some margin, this would become uneconomical. The chieftains therefore began to acquire more *staðir*, and finally sought to control and acquire other chieftainships. By controlling more *staðir* and chieftainships, the competition for tax-payers was lessened and returns would potentially have been higher. By controlling more than one chiefdom, the chieftains established Greater Chiefdoms (*Stór Goðorð*).

The first known Greater Chiefdom developed in Northern Iceland in the early 11th century. The chieftain there owned two chiefdoms, probably acquiring them through marriage or inheritance, but at the chieftains death his power disintegrated. In the 12th and 13th century Greater Chiefdoms became common, and, finally, all the chiefdoms became concentrated in five Greater Chiefdoms. Some of these could properly be called *states* (*ríki*) rather than chiefdoms, since their chieftains became rulers (or war lords), and the boundaries of most chiefdoms even became geographically fixed, comprising at least three to six *goðorð*, and one or two *Vorþing*-parishes. By 1220, most of the *states* had taken shape. Conflicts now involved *states*, not chieftainships as before (Sigurðsson 1989: 139f.).

Aside from controlling more *staðir* and chiefdoms through blood relations, chieftains and bishops also established small "armies" and fought for control of other chiefdoms. But one chieftain's killing of another chieftain was not enough to gain control of the latter's chiefdom.

The triumphing chieftain had to offer services or gifts to the followers of the fallen chieftain so they would accept his leadership. The gain of another *staðir* or chiefdom therefore not only resulted in a gain of revenue for the triumphant chieftain, but also increased his expenses.

Despite the law stating that the farmers were free to choose a chieftain to follow and change their allegiance each year, it seems that with the advent of the political struggle this choice all but disappeared (Karlsson 1972: 56). A chieftain holding two out of three chieftainships in a local-*ing* really had an exclusive say on local matters. Thus, the farmers had little choice but to accept the chieftain's word as law.²⁹ Of course, the farmers might have revolted so the chieftains made sure that at least a majority of the farmers were comparatively satisfied with his rule. This the chieftain would do by distributing gifts, upholding order, and representing his followers against other *states*.

In some cases a chieftain controlled not only a few local-*þings*, but the majority of chieftainships in a Quarter-*þing*. In most cases the local or quarter-*þings*, were simply put off, and only the *Alþing* itself survived. At times even the *Alþing* was unworkable because some chieftains would not attend.

When Hákon became king of Norway, in 1217, new alliances were offered with the chieftains, making them part of the Royal Circle and obligating them to adhere to his royal rules and wishes.³⁰ A part of

29 In a sense the chieftains became a ruling group that oversaw the enforcement mechanism of the law. As Tullock (1972) suggests, this type of situation relies overall less on reciprocity and continuous dealings and there is always a temptation here for the rulers to defect on the dealings, even at the cost of lesser production. The temptation is greater here since larger amounts are involved. In essence, therefore, reciprocity and continuous dealings are less important after a ruling class is established, than before, and the danger of breakdown, or rather defection, are more probable. The new situation is still "Hobbesian." What maybe needed is for someone to police the police (the *Goðar*), i.e. a separation of powers. The king of Norway, who had established a foothold in the country, was therefore in the end chosen as that "seperate power" by the farmers.

30 It has been suggested by some historians that the various kings in Norway always wanted to gain hold of Iceland, but that for some reason never managed to achieve their goal. Icelandic historians, earlier ones especially, tended to claim that it was patriotism on the part of the Icelanders that prevented the kings from this. But then in the 13th century the chieftains committed treason and abandoned patriotism in favor of Royal privileges. This explanation is, of course, not convincing and has therefore been rejected by modern historians (See Línal 1964). But the claim concerning the kings' goal may still be salvaged. If, as claimed, the kings wanted to gain Iceland as part of their kingdom, then the progress in technology was surely on their side in the longer-run. The kings may simply not have been able to achieve their goal in the 11th and 12th centuries

Hákon's deal was that his chieftain allies were to convince Icelanders to pay taxes to him and him alone and the king would guarantee the peace. The king was making an investment that could later bring ample returns. Chieftains in allying themselves voluntarily with the king had an obligation to obey the king's wishes and demands, and if they opposed him in any way had to surrender their property to the king (Jóhannesson 1958: 205-225). The chieftains may not have seen any advantage in fulfilling the king's wishes, since their income might be lower under his rule, and most did not obey him. The king declared them "traitors" and demanded possession of their property. To present cases and in general to achieve possession the king made alliances with other chieftains, who willingly fought for him and sometimes acquired control of more property.

This concentration of power, wealth-seeking and the state of war (with relatively small casualties) was the major reason for the fall of the Commonwealth. The major contenders in this struggle were the chieftains, the Church, and the Norwegian kings. All wanted more power and wealth. The Church demanded control over its own affairs, both in judicial and financial matters. The Church demanded its own internal law and tried to gain control, sometimes successfully, of *staðir*. Some of the chieftains were allied or related to the bishops, and therefore took the Church's side. The other chieftains saw that a more independent and wealthy Church could only come at their expense. These chieftains resisted the expansion of the Church, and some made alliances with the Norwegian kings. The kings were ready, especially in the 13th century, to make temporary alliances to gain foothold in Iceland.³¹

The chieftains, instead of being representatives, became warlords. The chiefdoms changed, they became warring states, and finally they collapsed through infighting. In the end, as Sigurðsson (1989: 141f.) says, "it was the chieftains' ability to mobilize the economic resources and manpower of their *ríki* that determined whether or not they survived the increasingly bitter and destructive power struggle. . ."

because of transportation and communication difficulties. By the 13th century, however, technology, especially in shipping, had advanced so much that the goal became achievable. This advance in technology gives the kings' intentions, at least, some plausibility.

31 There is some disagreement as to how important the institution of the Church itself was in this struggle. All historians admit that it did play a role, but the question is how important this role was. Stefánsson (1975) has given it the most prominent status.

Conclusion

The people who settled in Iceland solved their "Hobbesian problem" by establishing a decentralized institutional structure that fostered cooperation among them. A hierarchial cooperative group structure evolved, manifesting itself in institutions that encouraged reciprocal behaviour, where future repeated engagements were important enough to discourage defections. Production of private and public goods took place through these cooperative groups, aided by voluntary contributions of members. An institutional change, in the form of taxation, was initiated to secure a steadier finance for the public goods production. With an altered payoff matrix the game provided new incentives for behavior, resulting in a shorter time horizons for players and a lesser role for reciprocity. Rent-seeking, in essence, now provided higher returns than profit-seeking. An escalation of rent-seeking behavior resulted and cooperation broke down.

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