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Title
The Myth of the Disproportionate Influence of Small Parties in Israel

Permalink
https://escholarship.org/uc/item/8t67x8b8

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Publication Date
2005-05-11

The proposition that proportional representation gives small parties (particularly religious parties) disproportionate influence in Israeli politics is frequently taken as given, and has largely gone unchallenged. For example, advocates of constitutional change and electoral reform in Israel frequently cite the unwarranted power of small parties as a reason for making the control of government less proportional (Susser 1989, 1993, Elazar 1988). Outside observers also point to the extreme proportionality of the Israeli electoral system and the influence it affords small parties as a problem (Bogdanor 1993, Sartori 2000). However, to our knowledge no one has systematically tested whether the Israeli electoral system actually gives a disproportionate degree of power to small parties. This paper fills this gap. We find surprisingly little evidence that the electoral system gives small parties disproportionate influence. It is only in the case in the elections of 1981, 1984 and 1988 that small parties may have had bargaining power disproportionate to their size, and even here the degree of disproportionate influence is slight. Furthermore, this disproportionality is due less to the electoral system than to the fact that these elections were virtual dead heats between the two large parties. Even single-member district elections produce hung parliaments in such circumstances. Our analysis suggests that making the Israeli electoral system less proportional would probably not reduce the influence of small parties, and may even increase it.

Of course, we do not wish to claim that small parties have never been able to negotiate special privileges for their constituents. Nor do we claim that small parties have never been in a pivotal position. Indeed, much of the motivation for the constitutional reform movement in Israel came from the fact that during the 1980s, Israel was governed by unwieldy grand coalitions as a result of neither of the large parties being willing to accede to the demands of the religious parties (Sprinzak and Diamond 1993). This culminated in the coalition crisis of 1990, where a group of religious parties joined with Labor to bring down the government, but then refused to support a new government, leading to three months of uncertainty. No-one would claim that small parties are not significant in Israeli politics. However, this is not the same thing as claiming that the electoral system gives a systematic advantage to them in terms of influence over government. It is the latter claim that we wish to challenge.

The case of Israel is significant in comparative perspective. Together with the Netherlands it has one of the most "extreme" forms of proportional representation in the elections to its legislature, with all of the 120 seats in the Knesset allocated in a single national district. Thus it is a limiting case that provides us with a great deal of information about the effects of proportional elections. Some observers are unequivocal that the Israeli system is an example of the consequences of an electoral system being too proportional. For example, Sartori (2000) describes it as a "worst case" of proportional representation and a "bad" electoral system. Even Arend Lijphart (1993), who is generally well disposed towards proportionality, suggests

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that the Israeli system is too extreme and could benefit by becoming more moderate (that is, more majoritarian). Thus the case of Israel is extremely significant in terms of our knowledge of the effects of electoral systems.

Furthermore, understanding why small parties have disproportionate influence in Israel – if indeed they have disproportionate influence at all – is essential for assessing the likely effects of electoral reform. Proponents of making the Israeli electoral system less proportional argue that this will reduce the influence of small parties. However, if the electoral system does not actually privilege small parties, changing the electoral system will clearly not have the desired effect. We may note that two reforms in the Israeli political systems in the 1990s – direct election of the Prime Minister and primaries for party lists for Labor and Likud – produced effects opposite to those intended. Direct election of the Prime Minister was intended to weaken the bargaining position of small parties (Susser 1989, 1993); instead it led to greater political fragmentation and a decline in the vote share of the large parties. Nachmias and Sened (1996) explains this in terms of voters being free to vote for their sectional interests in the Knesset elections, the Prime Ministership already having been decided (see Susser 1996 for a post hoc defense of the reform). Direct elections were abandoned after the 2001 elections. Party primaries were first introduced by the Labor Party in 1992 and by Likud in 1996. It was hoped that these would reduce the influence of special interest and back-room dealing. However, several commentators suggest that the effect has been the opposite (Hazan 1997, Rahat and Sher-Hadar 1997, Aronoff 2000). Hazan argues that the fact that voters have to vote for multiple candidates puts a premium on name recognition and the support of organized interests, leading to a sharp increase in special interest legislation, particularly in the form of private member bills. Similarly, our analysis suggests that making the electoral system less proportional will, if anything, increase the influence of small parties by reducing competition amongst them.

We test the proposition that small parties have disproportionate influence in three ways. Firstly we ask whether the allocation of seats by proportional representation gives small parties bargaining power out of proportion to their size, using power score analysis. Secondly, we ask whether there is anything about the ideological placement of small parties that gives them an intrinsic strategic advantage. Finally, we ask whether small parties have been able to extract a larger number of cabinet seats than their contribution to the governing coalition would warrant.

Mechanisms of Disproportionate Influence

In order to determine whether the electoral system gives small parties disproportionate influence, we have first to consider the mechanisms through which small parties may be able to obtain disproportionate influence in the first place. That is, we have to explain how it is that an electoral system that distributes seats proportionate to votes can give some parties disproportionate influence. The answer, of course, is that the distribution of seats does not directly determine policy outcomes, but rather these are determined by coalition bargaining. Even though a party may be small, if it is necessary to form a governing coalition, it may have considerable bargaining power. The following section from Susser (1993) reflects this:

> "In the fifteen years that have passed since [the end of Labor hegemony], one fundamental fact of Israeli politics has not significantly changed: the two large parties who control the Knesset, the dovish and hawkish camps, have remained relatively close in size. Both control about fifty to fifty-five seats in the Knesset, and thus neither camp is able to form a majority coalition by itself. This has given

inordinate power to those parties that are "uncommitted" in regard to the major political issues of territories, security and foreign policy. Not being strictly constrained by ideological loyalties on these matters, they are able to join with either side."

The problem with this argument (apart from the factual claim that the small, religious parties are uncommitted on matters of security)[1] is that if a party is able to leverage its pivotal position into material benefits for its members, there is an incentive for other parties to do the same. Indeed, given the very low entry threshold in Israel, there is a strong incentive to form new parties to try to capture the rents that come from being pivotal. As a result, we would expect competition between small parties to undermine their bargaining power and blackmail potential. To show that small parties have disproportionate influence, it is not enough to show that these parties are able to trade their support on issues that are of low salience to them, in exchange for concessions on issues they consider crucial. This kind of compromise is a normal part of political negotiation in a plural society.[2] What we would need to show is that a certain group of small parties had an inordinately strong bargaining position, and was able to maintain this position in spite of new rivals who might choose to enter politics.

We can make this argument more precise using power scores. Roughly speaking, the Banzhaf index measures the share of bargaining power each party has in a legislative context (the Banzhaf and Penrose scores will be explained formally in the next section). Table 1 shows an example where a small party does have disproportionate power. Suppose we have three parties, with party A and B each winning 49% of the seats and party C winning 2%. In spite of its small size, party C has as much bargaining power as the two large parties, because any two parties can make a parliamentary majority. Consequently each party has a Banzhaf index of 33.3%. This situation corresponds roughly to the situation in West Germany before the entry of the Greens into the Bundestag in 1983. With Germany's high electoral threshold (5% of national vote), there were only three parties, and the smallest of them (the liberal Free Democrats) held the balance of power between the two larger parties, and were in government continuously between 1949 and 1998, with the exception of 1966-69. In spite of their small size, they typically took a third of cabinet posts.

Table 1– Banzhaf Indices with Three Parties

Party	A	B	C
Seat %	49	49	2
Banzhaf %	33.3	33.3	33.3

The situation in Israel, however, is very different from that illustrated in Table 1. In Israel there is a low electoral threshold (1.5% of national vote; 1% prior to 1992), and many parties. When we have many small and medium sized parties, these parties are far less likely to have disproportionate influence. This is because the large parties can play the small parties off against one another, shopping around for coalition partners. Consider Table 2. Here there are eleven parties of various sizes. Their Banzhaf indices are far closer to their seat share. The two largest parties, A and B, have Banzhaf indices slightly below their seat share, while parties C through K have indices slightly above their seat share.

Table 2 – Banzhaf Indices with Eleven Parties

Party	A	B	C	D	E	F	G	H	I	J	K
Seat%	30	30	10	10	5	5	2	2	2	2	2
Banzhaf %	24.9	24.9	12.4	12.4	6.1	6.1	2.6	2.6	2.6	2.6	2.6

In both Table 1 and 2, the two large parties are evenly matched, a situation that increases the influence of the small parties that hold the balance of power between them. If one party holds a clear plurality, its bargaining power is likely to be great, and consequently the bargaining power of the small parties will be slight. Pempel (1990) argues that if a party can be dominant in a proportional electoral system by winning 35-40% of the vote. If a party can win this level of support, it will be very hard to form a coalition against it. Indeed, the only coalitions able to exclude it may be coalitions of virtually all the other parties. If some of the other parties are anti-system parties that will not join a government coalition, and are not tolerable to some of the other parties, then it is impossible to form a government without the dominant party. This is the position the Christian Democratic Party enjoyed in Italy before 1994. Consider the situation in Table 3. Here Party A has a seat share of 40%, but a Banzhaf index of 58%. To form a government without it would require a coalition of at least six parties. It is notable that the small parties (E to K) have Banzhaf indices considerable less than their vote shares. It is very easy for Party A to play various potential coalition partners off against one another. Ironically, when there is a clear plurality winner, proportional representation parliaments produce surprisingly "majoritarian" outcomes in terms of bargaining power.

Table 3 – Banzhaf Indices with a Dominant Party

Party	A	B	C	D	E	F	G	H	I	J	K
Seat%	40	20	10	10	5	5	2	2	2	2	2
Banzhaf%	57.9	8.4	8.3	8.3	4.1	4.1	1.8	1.8	1.8	1.8	1.8

There are two other sources of bargaining power that are not reflected in power scores. Firstly, there is the power that comes from being the formateur of the government. Austin-Smith and Banks (1988) show that the party that has the right to try to form a government first has a considerable advantage, in that they can anticipate and beat the offers other parties may make in the coalition formation process. Generally, the largest single party is invited to try to form a government first, and this gives this party a strategic advantage. In Israel the right to be formateur first has gone to the largest single party, except during the period 1996-2001,when the Prime Minister was directly elected. Directly elected Prime Ministers have an even greater strategic advantage, in that they have a monopoly on the right to form a government.

A second additional source of bargaining power can come from the ideological placement of parties and the ideological incompatibility of certain coalitions. If some parties are unwilling to coalesce with one another, this may affect the bargaining power of other parties. For example, in the early 1980s the German Greens were unwilling to join a government coalition, but the votes they won from the Social Democrats prevented a Social Democrat / Free Democrat

coalition from amounting to a majority. As a result, there was no viable coalition that excluded the Christian Democrats, giving this party an extremely strong bargaining position. A party may also have great bargaining power if it has a central position and is the only party able to pivot between two large parties or blocs. This power, of course, depends on the large parties not being able or willing to form a grand coalition, and not being able to form minority governments. If it is possible for the large parties to shop around for small parties to make up a coalition, this source of power is also diminished.

Methods and Data

Data on election results and the composition of cabinets is freely available from the Israeli Knesset (http://www.knesset.gov.il) and the Israeli government (http://www.gov.il). The biographies of Knesset Members and journalistic sources (mainly the Jerusalem Post) were used to find the partisan make-up of cabinets. Care was taken to track Members of the Knesset who changed party between Knessets, which is not uncommon in Israel. The study covers the 9th to 16th Knessets (1977-2003). It thus starts with the first Knesset after the end of the Labor (Ma'arach) dominance. It is with the end of Labor dominance that the possibility of small parties holding the balance of power between Labor and Likud arises.

There has recently been considerable debate on the appropriateness of power indices, most notably in the Journal of Theoretical Politics, which devoted an issue to the topic. Therefore it is necessary to justify our use of these indices. The Penrose score (Penrose 1946) is essentially the proportion of all the possible minimum winning coalitions that a party is in. Thus it is a measure of the indispensability of a party. If a party has a Penrose score of 1, then it is indispensable, in that it is in all possible winning coalitions. Such a party is veto-player, in that it is not possible to form a winning coalition without it. A party with a Penrose score of zero is completely dispensable, in that it never makes the difference between a coalition winning or not, and thus has no influence over the outcome. If a party has a high Penrose score, then it is in most of the possible winning coalitions and is hard to exclude, whereas if its Penrose score is low, there are many coalitions that exclude it. Banzhaf (1965) independently reinvented the Penrose score, and normalized it so that the scores of all parties sum to one. This gives us a measure of the relative bargaining strength of parties, based on how dispensable each party is. In line with general usage, we refer to the normalized score as the Banzhaf index. The Banzhaf index is often justified in terms of being the expected outcome given the assumption that all coalitions are equally probable. Whereas this interpretation is sometimes useful, it involves an extra behavioral assumption (the equal probability of all coalitions) that is not strictly necessary. We prefer to think of the Banzhaf index as a measure of the relative excludability of parties.

It should be recognized that the most notable recent critics of power indices, Garrett and Tsebelis (1999) emphasize that they are criticizing the application of power indices to the study of the European Union, and not rejecting power indices outright. Many of the conditions that make the use of power indices problematic when applied to the European Union do not apply in the Israeli case. Garrett and Tsebelis criticize the power score approach for not taking into account institutional factors. In the European Union, the outcome does not depend on bargaining power within one institution, but on the interaction between the Council of Ministers, the European Parliament, the European Commission and member governments. Israel, however, has a simple unicameral parliament, which makes it an ideal candidate for the simple application of power scores.

The second criticism Garrett and Tsebelis (1999) make of power scores is that they do not take into account policy preferences and the fact that some coalitions are more likely than others. It is certainly true that the Penrose and Banzhaf indices are policy-blind. As such they should not be used to predict policy outcomes. Rather they provide a measure of the bargaining power the institutions bestow on various actors without regard to what these actors try to achieve with this power (See Lane and Berg 1999 and Braham and Holler 2005 for similar defenses of power indices.) This is precisely what we are interested in this paper – the degree to which the electoral system gives disproportionate influence to small parties.

Bargaining Power

We have argued above that small parties are only likely to have bargaining power disproportionate to their size when the large parties are almost tied in terms of seats. When one party is clearly larger than its competitors, it is this largest party that will have disproportionate bargaining power. Table 4 illustrates this in the case of the elections of 2003, 1999 and 1992, which produced decisive results. The 2003 election was the most extreme example of this phenomenon, with Likud having a Banzhaf index of 43% from a seat share of 31.7%. In these cases the Banzhaf index of the small parties are roughly proportional to their size. The Penrose score gives us an indication of why the largest party has such a dominant position.

Table 4 – Penrose and Normalized Banzhaf Indices in Israel (Decisive Elections)

	2003			1999			1992		
	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose
Likud	31.7	43.4	0.788	15.8	15.6	0.359	26.7	14.9	0.27
Labor	15.8	11.4	0.207	21.7	24.9	0.574	36.7	40.3	0.73
Shinui	12.5	10.6	0.193	5	4.7	0.107			
Shas	9.2	8.4	0.152	14.2	14.6	0.337	5	5.8	0.105
Ha-ichud Ha-leumi	5.8	4.5	0.081	3.3	2.9	0.066			
NRP	5	4.2	0.076	4.2	4	0.093	5	5.8	0.105
Meretz	5	4.2	0.076	8.3	7.3	0.168	10	12.7	0.23
Yahadut Hatorah	4.2	3.7	0.067	4.2	4	0.093	3.3	2.8	0.051
Am-Echad	2.5	2.1	0.038	1.7	1.8	0.041			
Balad	2.5	2.1	0.038	1.7	1.8	0.041			
Hadash-Ta'al	2.5	2.1	0.038	2.5	2.1	0.049	2.5	2.8	0.051
United Arab List	1.7	1.7	0.03	4.2	4	0.093			
Y'Israel B'Aliya	1.7	1.7	0.03	5	4.7	0.107			
Y'Israel Beteinu				3.3	2.9	0.066			
Tsomet							6.7	9.3	0.168
Moledet							2.5	2.8	0.051
Center Party				5	4.7	0.107			
Arab Democratic party							1.7	2.8	0.051

In 2003 Likud has a Penrose score of 0.79, indicating that it is in 79% of all minimum winning coalitions. That is, there are very few possible winning coalitions that exclude Likud, and these

are typically coalitions of most of the remaining parties. Even though Labor only won 22% of the seats in 1999, it is still in 57% of the winning coalitions.

If the election is close, however, with the two large parties in a virtual dead heat, then small parties may have somewhat disproportionate bargaining power. However, because the large parties can play the many small parties off against each other, they will not have as much power as a single small party holding the balance of power would have. Table 5 gives results for the elections of 1996 and 1988, both of which were very close. In the case of the 1996 elections, where the two large parties were separated by 1.5% of the seats (2 seats), the Banzhaf scores are approximately proportional to size. However, in 1988, when one seat separated Labor and Likud, the Banzhaf indices of the two large parties are substantially smaller than their seat share, and the Banzhaf indices of the small parties are disproportionately large. The difference appears to be that in 1996 there were a number of medium sized parties that made it easier for the large parties to put together winning coalitions, whereas in 1988, there were no such parties, so there was no choice between a Likud-Labor grand coalition and a coalition containing many small parties.

Table 5 – Penrose and Normalized Banzhaf Indices in Israel (close elections)

	1996			1988		
	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose
Likud	26.7	22	0.462	33.3	22.8	0.52
Labor	28.3	25.7	0.538	32.5	21.1	0.48
Shinui				1.7	3	0.068
Shas	8.3	10	0.21	5	8.3	0.189
NRP	7.5	8.9	0.187	4.2	7.2	0.164
Meretz	7.5	8.9	0.187			
Yahadut Hatorah	3.3	3.8	0.079			
Hadash-Ta'al	4.2	4.7	0.099	3.3	4.7	0.108
United Arab List	3.3	3.8	0.079			
Y'Israel B'Aliya	5.8	6.6	0.138			
Tsomet				1.7	3	0.068
Moledet	1.7	1.8	0.038	1.7	3	0.068
The Third Way	3.3	3.8	0.079			
Arab Democratic party				0.8	0.9	0.02
Agudat Y'Israel				4.2	7.2	0.164
Ratz				4.2	7.2	0.164
Tehiya				2.5	3.9	0.089
Mapam				2.5	3.9	0.089
Degel Hatorah				1.7	3	0.068
Progressive List for Peace				0.8	0.9	0.02

Table 6 gives the results for the elections of 1984, 1981 and 1977. The 1977 elections follow the pattern of the decisive elections, with the largest party, Likud, having disproportionate bargaining power. The 1981 and 1984 elections were both very close and thus follow the same pattern as 1988. In both these elections the Banzhaf indices of the large parties were less than their seat share, and the Banzhaf scores of the small parties were disproportionately large.

We can also consider the extent to which the strong convention that Arab parties may not be pivotal in governing coalitions affects these results. We recalculated the Penrose scores and Banzhaf indices taking this into account, and the results are presented in the appendix. The exclusion of the Arab parties does not significantly change the relative bargaining power of the remaining parties, perhaps because the Arab parties are relatively small. This is not to say that the exclusion of the Arab parties is not significant – it has obviously reduced the influence of the Arab parties themselves (see Lustick 1988, Aronoff 2000). However, this does appear to affect the balance of power amongst the remaining parties.

Table 6 – Penrose and Normalized Banzhaf Indices in Israel 1977-84

	1984			1981			1977		
	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose
Likud	34.2	17.5	0.393	40	27.8	0.537	35.8	41.7	0.706
Labor	36.7	27	0.607	39.2	24	0.463	26.7	17.4	0.294
Shinui	2.5	4.8	0.107	1.7	3.9	0.076			
Shas	3.3	6.2	0.139						
NRP	3.3	6.2	0.139	5	14	0.271	10	12.6	0.214
Yahadut Hatorah	2.5	4.8	0.107						
Hadash-Ta'al	3.3	6.2	0.139	3.3	8.2	0.158	4.2	2.8	0.047
United Arab List							0.8	0.7	0.012
Agudat Y'Israel	1.7	3.4	0.076	3.3	8.2	0.158	3.3	2.6	0.044
Ratz	2.5	4.8	0.107	0.8	1.9	0.037	0.8	0.7	0.012
Tehiya	4.2	8.7	0.195	1.7	3.9	0.076			
Progressive List for Peace	1.7	3.4	0.076						
Morashi-Po'aeli Agudat Israel	1.7	3.4	0.076				0.8	0.7	0.012
Tami	0.8	1.3	0.029	2.5	6.2	0.119			
Kach	0.8	1.3	0.029						
Ometz	0.8	1.3	0.029						
Telem				0.8	1.9	0.037			
Democratic Movement for Change							12.5	16.7	0.282
Plato Sharon							0.8	0.7	0.012
Shlomzion							1.7	1.4	0.023
Mahaneh Sheli							1.7	1.4	0.023
Independent Liberals							0.8	0.7	0.012

Ideological Position and Viable Coalitions

The previous section shows that the distribution of seats does not generally give small parties disproportionate power. However, a party may still have disproportionate influence if it is able to act as a "pivot" between two blocs. For example, in Germany in the 1970s, the Free Democratic Party held this position, and determined who the government would be (Indeed in 1969, 1976 and 1980 the FDP allowed Social Democratic led governments even though the Christian Democratic party had more seats.) However, this kind of power is clearly undermined if the two

main blocs are able to coalesce. In order to see what coalitions are possible in Israel, an obvious starting point is to consider which parties have joined in governing coalitions. Table 7 shows the number of years each pair of parties has spent in power together. This table includes the parties that have been represented in the Knesset for at least half the period studied, and that have participated in government at least once. It thus excludes the Arab parties (which have never held a government ministry) and also the orthodox party Yahadut Hatorah (and its predecessors Degel Hatorah and Agudat Y'Israel), which has refused to accept cabinet posts for theological reasons (although they have accepted deputy ministries). The lack of white space in the table shows that virtually every party that has participated in government has been in a coalition with virtually every other such party at some time or another, although some pairing are far more common than others.

Table 7 – Number of Years Combination of Parties in Government with Each Other

	Likud	Labor	Shinui	Shas	NRP	Meretz
Likud		8	12	13	18	
Labor	8		6	11	6	6
Shinui	12	6		6	10	
Shas	13	11	6		11	3
NRP	18	6	10	11		2
Meretz		6		3	2	

It is possible to visualize the information in Table 7 using multidimensional scaling. Multidimensional scaling is a technique that plots observations (here parties) in space so that the distance between them corresponds to some measure of similarity. Here similarity is measured by how often parties join each other in coalitions, so parties plotted close to one another are those that frequently coalesce.[3] The two dimensions have no intrinsic meaning, but can be given substantive interpretations. Dimension 1 places the "dovish" parties on security issues (Meretz, Labor) on the left and the "hawkish" parties (Likud, NRP) on the right. Dimension 2 divides the religious from the secular parties. In Figure 1 Shas does appear to occupy a pivotal position between Labor and Likud, and indeed Shas is the party most frequently accused of exercising influence disproportionate to its size. Returning to Table 7, we can see that this position results from the fact that Shas has been equally able to join in Labor-led and Likud-led coalitions, whereas most other small parties have tended to coalesce mostly with one or the other.

However, there are three reasons to be skeptical of the claim that Shas has been disproportionately powerful because of its ideological position. Firstly, the two main parties, Likud and Labor are able to form governments together, and frequently have (1984-90, 2001-3, 2005-). Given that grand coalitions are possible, Shas' central position does not make it indispensable. Furthermore both Labor and Likud have put together non-grand coalitions that exclude Shas. For example, when Shas left the Labor-led government in 1993, Labor and Meretz continued as a minority government with the implicit support of the Arab parties. Furthermore, when Shas has been in power, it has usually been balanced by other parties that are strongly secular. Indeed tension with Meretz was largely responsible for Shas leaving the Rabin government in 1993, while Shin'ui has made opposition to religious subsidies a key item in its negotiations with Likud, climaxing in it voting against the Budget in 2004.

Figure 1 – Multidimensional Scaling of Israeli Coalition Formation
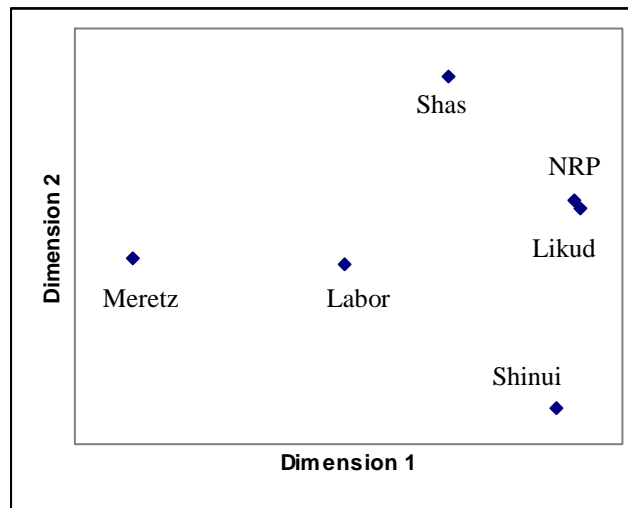
	Dim 1	Dim2
LIKUD	.77	.13
LABOR	-.52	-.13
SHINUI	.64	-.83
SHAS	.05	.77
NRP	.74	.17
MERETZ	-1.68	-.11

Secondly, the degree to which Shas is ideologically central is also questionable. It is true that Shas has taken an equivocal position on security issues such as territorial concessions. Shas joined the 1992 Labor government which opened negotiations with the PLO. However, Shas abstained in the vote to ratify the first Oslo Accord, and in 1996 Shas supported Netanyahu for (directly-elected) Prime Minister. Studies of Shas voters show that they are even more hard-line on security issues than Likud supporters (Yuchtman-Yaar and Hermann 2000; Hazan 2000). However, the leadership of Shas appears to have been willing to be flexible on what are generally considered the most important issues facing Israel in order to win concessions on issues directly affecting its constituency (see next section). Shas' central position and ability to join governments of different stripes may be less a result of it being powerful than of it being accommodating.

Finally there is little evidence that Shas has been able to act as "kingmaker", determining whether a Labor-led or Likud-led coalition comes to power. In the period covered, the Prime Ministership has always gone to the largest single party, except in 1996 and 2001 when the Prime Minister was directly elected. Shas attempted to play the pivot in 1990, joining Labor in voting out a grand coalition government, but refusing to vote in its replacement. However, as we will see in the next section, months of bargaining produced a Likud-led government and only modest gains for Shas. This was the period in which Shas' power was greatest, as it faced a virtual dead heat between the major parties. For most of the rest of the period, Shas has appeared willing to join whatever government is being proposed, as opposed to having the power to determine which government forms.

Cabinet Representation

In the previous sections we considered the bargaining power that the election results and ideological placement gave to various parties. In this section we consider whether small parties are able to leverage their bargaining power into a disproportionate share of cabinet seats. Various authors (Browne and Franklin 1973, Browne and Frendreis 1980, Schofield and Laver 1985) have argued that there is a strong norm where each party gets the cabinet seats proportional to its contribution to the governing coalition in terms of legislative seats, but that small parties sometimes receive "bonus seats" because their bargaining power is greater than their size would suggest. Tables 8 through 11 test this, giving the number of cabinet seats for each party, its percentage contribution to the winning legislative coalition, and the ratio between its share of cabinet seats and its seat contribution to the governing coalition.[4] Thus if the ratio is greater than one, a party receives more seats than its size would entitle it to, and the reverse if the ratio is less than one. We have also calculated results for deputy minister as well as cabinet posts. This is significant as some religious parties (Agudat Y'Israel, Degel Hatorah, Yahadut Hatorah) have refused to take cabinet jobs, but have received deputy ministries. These results are given in the appendix.

Table 8 – Cabinet Representation 2001-3

	Cabinet seats	2003 %Coalition Knesset seats	ratio	Cabinet seats	2001 %Coalition Knesset seats	ratio
Likud	12 (54.5%)	55.9	0.97	8 (33.3%)	25.6	1.3
Labor				8 (33.3%)	35.2	0.95
Shinui	5 (22.7%)	22	1.03			
Shas				5 (20.8%)	23	0.9
Ha-ichud Ha-leumi	2 (9.1%)	10.2	0.89	1 (4.2%)	5.3	0.79
NRP	2 (9.1%)	8.8	1.03			
Am-Echad				1 (4.2%)	2.8	1.5
Y'Israel B'Aliya	1 (4.5%)	3	1.5	1 (4.2%)	8.1	0.52

Table 9 – Cabinet Representation 1996-9

	Cabinet seats	1999 %Coalition Knesset seats	Ratio	Cabinet seats	1996 %Coalition Knesset seats	ratio
Likud				13 (68.4%)	51.7	1.32
Labor	11 (47.8%)	37.2	1.28			
Shas	4 (17.4%)	24.3	0.72	2 (10.5%)	16.1	0.65
NRP	1 (4.3%)	7.2	0.6	2 (10.5%)	14.5	0.72
Meretz	3 (13.0%)	14.2	0.92			
Y'Israel B'Aliya	1 (4.3%)	8.6	0.5	1 (5.3%)	11.2	0.47
Center Party	2 (8.7%)	8.6	1.01			
The Third Way				1 (5.3%)	6.4	0.83
Other	1 (4.3%)	0				

Table 10 – Cabinet Representation 1988-1992

	1992			1990			1988		
	Cabinet seats	%Coalition Knesset seats	ratio	Cabinet seats	%Coalition Knesset seats	ratio	Cabinet seats	%Coalition Knesset seats	ratio
Likud				12 (63.2%)	71.3	0.89	11 (41.7%)	42	1.05
Labor	12 (75%)	71	1.06				11 (41.7%)	41	1.07
Shinui							1 (4.2%)	2.1	1.9
Shas	1 (6.3%)	9.7	0.65	3 (15.8%)	10.7	1.48	2 (8.3%)	6.3	1.27
NRP				2 (10.5%)	9	1.17			
Meretz	3 (18.8%)	19.3	1.03						
Tsomet				1 (5.3%)	3.6	1.47			
Tehiya				1 (5.3%)	5.4	0.98			

Table 11 – Cabinet Representation 1977-1984

	1984			1981			1977		
	Cabinet seats	%Coalition Knesset seats	ratio	Cabinet seats	%Coalition Knesset seats	ratio	Cabinet seats	%Coalition Knesset seats	ratio
Likud	11 (47.8%)	42.8	1.1	15 (88.2%)	84.2	1	8 (57.2%)	61.4	0.9
Labor	9 (39.1%)	45.9	0.9						
Shinui	1 (4.3%)	3.1	1.4						
Shas	1 (4.3%)	4.1	1						
NRP	1 (4.3%)	4.1	1	2 (11.8%)	10.5	1.1	3 (21.4%)	17.2	1.2
Tami				1 (6%)	5.3	1.1			
DMC							3 (21.4%)	21.4	1

The ratio of party's cabinet seats to that party's contribution to the winning coalition is typically around one, indicating adherence to the norm of proportionality. Where this is not the case, it is typically large parties, not small, that are over-represented. Indeed there are very few cases where small parties have a ratio of significantly greater than one, except for parties that have only one cabinet seat. Thus it does not seem to be the case that small parties are able to bargain for "bonus ministries" in Israel, as Browne and Franklin (1973) suggest may happen in some cases. There is one notable exceptions. In 1990, Shas had three cabinet seats, when its contribution to the winning coalition would only entitle it to two. Shas had been one of the

parties that had voted to dissolve the Labor-Likud coalition, but had refused to vote in a new coalition, preferring instead to bargain for policy and portfolio concessions. This resulted in three months of caretaker government and is perhaps the primary example given of small parties being able to hold the political system hostage. In spite of all this, Shas was still only able to negotiate one extra cabinet seat. As we have seen, following the 1981, 1984 and 1988 elections, small parties had bargaining power slightly disproportionate to their size. However, only in 1990 was one small party able to get disproportionate cabinet representation. This suggests that the large parties have been extremely unwilling to accept demands for disproportionate representation from small parties, even if it means the large parties have to form grand coalitions.

The most notable violations of the proportionality norm have actually been to the benefit on the large parties, as in 1996, 1999 and 2001. These were the governments formed by directly elected Prime Ministers. In all three cases, the party of the directly elected Prime Minister is considerably over-represented in terms of cabinet seats. This is not particularly surprising. Given that the directly elected Prime Minister has a monopoly on proposing government coalitions, he has considerable bargaining power. However, we should be careful about concluding that the direct election of the Prime Minister increased the influence of the largest party. In 1999 and 2001 the Prime Minister's party claimed 47.8% and 33.3% of the cabinet seats. These figures are actually the lowest percentage of cabinet seats that the largest party claimed in any government since 1977. The period when the Prime Minister was directly elected did not lead to the largest party winning more cabinet seats; rather the largest party won fewer Knesset seats, and it is this that leads to it being over-represented in the cabinet.

When we consider deputy ministries as well as cabinet posts, our results do not change significantly (see appendix). There are very few cases where a small party receives a post more than it would be entitled to by proportionality. In 1990, in addition to Shas, Agudat Y'Israel and the NRP received a "bonus" deputy ministry. Shas also received an extra deputy ministry in 1992. The only other cases of small parties receiving extra posts are Tami and the NRP in 1981, both of whom received an extra deputy ministry.

We find little evidence that small parties are over-represented in terms of number of cabinet seats. However, we can also consider which portfolios small parties typically receive. Browne and Franklin (1973) suggest that some portfolios are more likely to given to small parties than others. In the case of Israel between 1977 and 2004, the posts of Prime Ministership, Finance Minister, Foreign Minister, Defense Minister and Justice Minister – that is, the posts overseeing the central state functions – have been virtually monopolized by the two large parties, although the Justice Minister has occasionally been an independent jurist. There are two exceptions to this. In 1977 Shmuel Tamir of the Democratic Movement for Change became Justice Minister. The Democratic Movement for Change, a secular coalition including Shin'ui, won 15% of the vote in 1977, and was the largest coalition partner of Likud. In 2003 Tommy Lapid of Shin'ui became Justice Minister. (In 1999 David Levy, a member of the small Gesher group, became Foreign Minister in the Barak government. However Gesher had run in the 1999 elections on a common list with Labor.) None of the religious parties has received any of these portfolios in the period covered here.

Most of the other portfolios have been held by one of the smaller parties at some time or other. However, there are only four portfolios that have gone to a small party five or more times. These are listed in Table 12. The Interior Ministry has gone to one of the religious parties more often than not. The Interior Ministry is a catch-all portfolio including population registry, electoral rolls and emergency services (but not criminal justice). Its importance to religious

parties lies in the fact that it regulates life-cycle events such as marriage and conversion. The religious parties have defended the Orthodox monopoly over state recognition of these ceremonies (although Conservative and Liberal weddings and conversions have been recognized if performed outside Israel). Thus this ministry is of vital importance to the Orthodox parties. The importance of the Religious Affairs portfolio to religious parties is obvious. Education and Culture has occasionally been granted to the National Religious Party, but it has also been held by Labor, Likud and the secular left-wing Meretz party. The final portfolio that has often been held by small parties is Labor and Social Affairs/Welfare. This has also frequently been held by religious parties such as NRP, Shas and Tami, a small Orthodox list.

Table 12 – Most Common Portfolios for Small Parties

	Interior	Religious Affairs	Education and Culture	Labor and Social Affairs / Welfare
2003-	**Shin'ui**	**-**	Likud	**NRP**
2002-3	**Shas**	**Shas**	Likud	**Shas**
2001-2	**Shas**	**Shas**	Likud	**Shas**
1999-2001	**Yisrael B'Aliyah**	**Shas**	**Meretz**	**Shas**
1996-9	Likud	Likud	**NRP**	**Shas**
1995-6	Labor	Labor	**Meretz**	**Shas**
1992-5	**Shas**	-	**Meretz**	Labor
1990-2	**Shas**	**NRP**	**NRP**	Likud
1988-90	**Shas**	-	Labor	Likud
1986-8	**Shas**	**NRP**	Labor	Likud
1984-6	**-**	-	Labor	Likud
1983-4	**NRP**	**NRP**	**NRP**	**Tami**
1981-3	**NRP**	**NRP**	**NRP**	**Tami**
1977-81	**NRP**	**NRP**	**NRP**	**-**

This pattern of portfolio allocation is consistent with the hypothesis that small parties trade influence on issues they care less about for influence on issues they consider vital. Small parties do not receive a disproportionate share of cabinet posts. Furthermore they virtually never receive the cabinet posts usually considered most important. However, they do receive certain posts that are particularly important to their constituencies (such as the Interior Ministry and Religious Affairs) a disproportionate amount of the time. It is surely an exaggeration to claim that the religious parties do not care about national issues such as security and the peace process (see Yuchtman-Yaar and Hermann 2000; Hazan 2000). However, Shas in particular has been willing to join Labor governments that have advocated the peace process in return for concessions on domestic policy, such as control of the Interior Ministry and state funding of independent religious schools. Whether such vote trading is to be approved of is a normative question. The consociational literature, following Lijphart (1977) argues that such accommodations are vital for stability in divided societies. However, whatever ethical judgments we make, the fact that small parties have disproportionate influence over a few policy domains does not indicate that they have disproportionate influence overall.

Conclusion

We find little evidence that small parties have disproportionate influence in Israeli politics. In terms of bargaining power, it is only in three Knessets (1981, 1984, 1988) in the period 1977-2003 that small parties have bargaining power out of proportion to their size. Furthermore, even then small parties were not able to claim a disproportionate share of the cabinet seats, with the exception of Shas in 1990, which claimed one cabinet seat more than its size would entitle it to. It is true that small parties typically hold the balance of power between Labor and Likud. However, there are many small parties, so the large parties are able to play them off against each other, and so reduce their bargaining power. This is not to say that small parties in general, and the religious parties in particular, have not had a major influence on Israeli politics; clearly they have had. However, the religious parties account for around 20% of the Israeli electorate. They appear to have been able to dominate certain policy domains by trading in their influence in other issues they are less concerned about.

The relative bargaining power of different parties under the Israeli electoral systems depends largely on whether the election produces a clear plurality winner. If one party is significantly larger than it rivals, then it is likely to be in a dominant position, even if it does not have a majority. In this case, Israel's extremely proportional electoral system actually produces a rather "majoritarian" result, where the largest single party is almost certain to form the government. This is because it is very difficult to construct a coalition that excludes the largest party, as this coalition would need to include most of the other parties. It is only when the election result is a virtual tie between the two large parties that the result is indeterminate and small parties may have disproportionate influence. However, this is less a result of the electoral system than an accurate reflection of the electorate. If the two main parties essentially tie, even single-member district plurality will produce a hung parliament. As McLean et al (2004) point out, the United Kingdom had hung parliaments between 1885-1900, 1910-8, and approximately once every quarter century since (1923, 1929, 1951 and 1974). Furthermore, in many of these cases a single small party held the balance of power (most notably the Irish Party before Irish Independence in 1922) and thus had a bargaining position far stronger than the multiple small parties in Israel.

When we consider reform of the Israeli electoral system, our analysis suggests some proposed reforms may have results different, or even opposite, to what their authors desire. For example, it is not clear that increasing the electoral threshold required to win seats in the Knesset would reduce the influence of small parties. It may well reduce the number of parties, by eliminating the smallest ones. However, the large parties would then face a smaller number of potential coalition partners, whose bargaining position would as a result be greater. The proliferation of small parties actually undermines the influence of these parties, so forcing them to consolidate may well increase their influence. For similar reasons, it is not clear that single-member district elections would reduce the power of small parties when the election is very close. In these circumstances, we would still have a hung parliament, and a small number of small parties may have a very strong bargaining position. Sartori (2000) suggests a system whereby the largest party is awarded extra seats equivalent to 20% of the Knesset and the second largest party receives a 15% bonus. Apart from the legitimacy problems of an electoral reform transparently designed to over-represent voters of two particular parties at the expense of all the others, it is unclear that this would have the effect desired. If the bonus for the largest party does not give that party an absolute majority, it is still dependent on the support of small parties. If it does give the largest party an absolute majority, then it is possible that a party with less than a

third of the vote and only few thousands votes more than its main competitor could be given absolute control. In either case, the 15% given to the second largest party is irrelevant. If the largest party is awarded an absolute majority, then it does not matter how many seats the second party has. If the largest party is not awarded a majority, then it can make a deal with a small party, or it could form a grand coalition with second party, both of which it could do without the 15% awarded to the second party. Essentially, Sartori's proposal produces outcomes equivalent to a winner-take-all system, with all the associated benefits and problems.

It is important to recognize the limits of the effects of electoral systems. If a county is split down the middle on the most important issue facing it, no electoral system can fix this, except perhaps by awarding victory to the slightly larger faction, with all the potential for instability associated with this. Thus when we consider the performance of the Israeli electoral system in comparative perspective, what we need to consider is how other electoral systems would have performed in the counterfactual situation that they were used in a country facing the same circumstances as Israel. Under most electoral systems, when the two main parties tie, there is a hung parliament and small parties hold the balance of power. When this happens in Israel, small parties have somewhat increased bargaining power, although they are rarely able to translate this into gains in terms of cabinet portfolios. When elections produce a clear victor, small parties do not have disproportionate influence. Thus the disproportionate influence of small party in Israel is not a necessary result of the electoral system, but an (occasional) result of circumstances that produce similar effects under most electoral systems.

Bibliography

Aronoff, Myron. 2000. "The Americanization of Israel: Political and Cultural Change." <u>Israel Studies</u> 5:1.

Austen-Smith, David and Jeffrey Banks. 1988. "Elections, Coalitions and Legislative Outcomes." <u>American Political Science Review</u> 82.2: 405-22

Banzhaf, John III. 1965. "Weighted Voting Doesn't Work: A Mathematical Analysis." <u>Rutgers Law Review</u> 19:317-43.

Bogdanor, Vernon. 1983. "The Electoral System, Government, and Democracy," in Ehud Sprinzak and Larry Diamond (Eds.), <u>Israeli Democracy Under Stress.</u> Boulder: Lynne Rienner.

Braham, Matthew and Manfred Holler. 2005. "The Impossibility of a Preference-Based Power Index." <u>Journal of Theoretical Politics</u> 17: 137-57.

Browne, E. & M. Franklin. 1973. "Aspects of Coalition Payoffs in European Parliamentary Democracies." <u>American Political Science Review</u> 67.2: 453-69.

Browne, E. & J. Frendreis. 1980. "Allocating Coalition Payoffs by Conventional Norm: An Assessment of the Evidence from Cabinet Coalition Situations." <u>American Journal of Political Science</u> 24.4: 753-68.

Buchanan, James, & Gordon Tullock. 1962. <u>The Calculus of Consent: Logical Foundations of Constitutional Democracy</u>. Ann Arbor: University of Michigan Press.

Don-Yehiya, Eliezer. 2000. "Conflict Management of Religious Issues: The Israeli Case in a Comparative Perspective," in Reuven Hazan and Moshe Maor (eds.), <u>Parties, Elections and Cleavages: Israel in Comparative and Theoretical Perspective</u>. Portland: Frank Cass.

Elazar, Daniel. 1988. "Electoral and Constitutional Reform for Israel." Jerusalem Center for Public Affairs: http://www.jcpa.org/dje/articles2/electconstref.htm.

Felsenthal, Dan and Moshe Machover. 2001. "Myths and Meanings of Voting Power: Comments on a Symposium." <u>Journal of Theoretical Politics</u> 13.1: 81-97.

Garrett, Geoffrey and George Tsebelis. 1999. "Why Resist the Temptation to Apply Power Indices to the European Union?" <u>Journal of Theoretical Politics</u> 11.3: 291-308.

Hazan, Reuven. 1997. "The 1996 Intra-Party Elections in Israel: Adopting Party Primaries." <u>Electoral Studies</u> 16.1: 95-103.

Hazan, Reuven. 2000. "Religion and Politics in Israel: The Rise and Fall of the Consociational Model," in Reuven Hazan and Moshe Maor (eds.), <u>Parties, Elections and Cleavages: Israel in Comparative and Theoretical Perspective.</u> Portland: Frank Cass.

Katz, Richard. 1997. <u>Democracy and Elections</u>. Oxford: Oxford University Press.

Kruskal, Joseph and Myron Wish. 1978. <u>Multidimensional Scaling</u>. Newbury Park, CA: Sage.

Lane, Jan-Erik and Sven Berg. 1999. "Relevance of Voting Power." <u>Journal of Theoretical Politics</u> 11.3: 309-20.

Lijphart, Arend. 1977. <u>Democracy in Plural Societies</u>. Hew Haven: Yale University Press.

Lijphart, Arend. 1993. "Israeli Democracy and Democratic Reform in Comparative Perspective,"in Ehud Sprinzak and Larry Diamond (eds.), <u>Israeli Democracy Under Stress</u>. Boulder: Lynne Rienner.

Lustick, Ian (1989) "The Political Road to Binationalism: Arabs in Jewish Politics," in Ilan Peleg and Ofira Seliktar (eds.), <u>The Emergence of a Binational Israel: The Second Republic in the Making.</u> Boulder, CO: Westview.

McLean, Iain, Alistair McMillan & Dennis Leech. 2004. "Duverger's Law, Penrose's Power Index and the Unity of the United Kingdom", Paper presented for the Annual Meeting of the Public Choice Society, Baltimore, MD, March 11-13.

Miller, Nicholas. 1983. "Pluralism and Social Choice." American Political Science Review 77.3:734-47.

Nachmias, David & Itai Sened. 1997. "The Bias of Pluralism: The Redistributive Effects of the New Electoral Law," in Asher Arian and Michael Shamir (eds.), The Elections in Israel 1996. Albany: State University of New York Press.

Pempel, T.J. 1990. Uncommon Democracies: The One-Party Dominant Regimes. Ithaca: Cornell University Press.

Penrose, Lionel. 1946. "The Elementary Statistics of Majority Voting." Journal of the Royal Statistical Society 109: 53-7.

Sartori, Giovani. 2000. "The Party-Effects of Electoral Systems", in Reuven Hazan and Moshe Maor (eds.), Parties, Elections and Cleavages: Israel in Comparative and Theoretical Perspective. Portland: Frank Cass.

Schofield, Norman & Michael Laver. 1985. "Bargaining Theory and Portfolio Payoffs in European Coalition Governments 1945-83". British Journal of Political Science 15: 143-69.

Shapley, Lloyd & Martin Shubik. 1954. "A Method for Evaluating the Distribution of Power in a Committee System." American Political Science Review 48:787-92.

Sprinzak, Ehud & Larry Diamond. 1993. "Introduction," in Ehud Sprinzak and Larry Diamond (eds.), Israeli Democracy Under Stress. Boulder: Lynne Rienner.

Susser, Bernard. 1989. "'Parliadential' Politics: A Proposed Constitution for Israel." Parliamentary Affairs 42: 112.

Susser, Bernard. 1993. "Towards a Constitution for Israel", Saint Louis Law Journal 37: 939-71.

Susser, Bernard. 1998. "The Direct Election of the Prime Minister: A Balance Sheet," in Daniel Elazar and Shmuel Sandler (eds), Israel at the Polls 1996. Portland: Frank Cass.

Yuchtman-Yaar, Ephraim and Tamar Hermann. 2000. "Shas: The Haredi-Dovish Image in a Changing Reality." Israel Studies 5.2: 32-77.

Appendix

Table A1- Penrose and Normalized Banzhaf Indices in Israel with Arab Exclusion (decisive elections)

	2003			1999			1992		
	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose
Likud	31.7	45.5	0.777	15.8	16.9	0.354	26.7	16	0.273
Labor	15.8	12.3	0.211	21.7	26.7	0.559	36.7	42.6	0.727
Shinui	12.5	11.2	0.191	5	5.1	0.107			
Shas	9.2	8.7	0.148	14.2	15.7	0.329	5	6	0.102
Ha-ichud Ha-leumi	5.8	4.8	0.082	3.3	3.2	0.067			
NRP	5	4.6	0.078	4.2	4.3	0.091	5	6	0.102
Meretz	5	4.6	0.078	8.3	8.3	0.174	10	13.3	0.227
Yahadut Hatorah	4.2	4.1	0.07	4.2	4.3	0.091	3.3	3.2	0.055
Am-Echad	2.5	2.5	0.043	1.7	1.9	0.039			
Y'Israel B'Aliya	1.7	1.8	0.031	5	5.1	0.107			
Y'Israel Beteinu				3.3	3.2	0.067			
Tsomet							6.7	9.6	0.164
Moledet							2.5	3.2	0.055
Center Party				5	5.1	0.107			

Table A2 – Penrose and Normalized Banzhaf Indices in Israel with Arab Exclusion (close elections)

	1996			1988		
	Seat %	Banzhaf %	Penrose	Seat %	Banzhaf %	Penrose
Likud	26.7	25.4	0.469	33.3	25.8	0.534
Labor	28.3	28.8	0.531	32.5	22.6	0.466
Shinui				1.7	2.8	0.057
Shas	8.3	10.6	0.195	5	9.5	0.196
NRP	7.5	9.3	0.172	4.2	7.5	0.154
Meretz	7.5	9.3	0.172			
Yahadut Hatorah	3.3	3.8	0.07			
Y'Israel B'Aliya	5.8	7.2	0.133			
Tsomet				1.7	2.8	0.057
Moledet	1.7	1.7	0.031	1.7	2.8	0.057
The Third Way	3.3	3.8	0.07			
Agudat Y'Israel				4.2	7.5	0.154
Ratz				4.2	7.5	0.154
Tehiya				2.5	4.4	0.09
Mapam				2.5	4.4	0.09
Degel Hatorah				1.7	2.8	0.057

Table A3 – Shapley and Banzhaf Indices in Israel (decisive elections)

	2003			1999			1992		
	Seat %	Banzhaf %	Shapley %	Seat %	Banzhaf %	Shapley %	Seat %	Banzhaf %	Shapley %
Likud	31.7	43.4	40.5	15.8	15.6	15.9	26.7	14.9	18.2
Labor	15.8	11.4	13.4	21.7	24.9	24.8	36.7	40.3	40.7
Shinui	12.5	10.6	11.2	5	4.7	4.6			
Shas	9.2	8.4	8.1	14.2	14.6	14.6	5	5.8	5.4
Ha-ichud Ha-leumi	5.8	4.5	4.5	3.3	2.9	2.8			
NRP	5	4.2	4.3	4.2	4	4.	5	5.8	5.4
Meretz	5	4.2	4.3	8.3	7.3	7.6	10	12.7	12.2
Yahadut Hatorah	4.2	3.7	3.9	4.2	4	4.	3.3	2.8	2.5
Am-Echad	2.5	2.1	2.1	1.7	1.8	1.7			
Balad	2.5	2.1	2.1	1.7	1.8	1.7			
Hadash-Ta'al	2.5	2.1	2.1	2.5	2.1	2.1	2.5	2.8	2.5
United Arab List	1.7	1.7	1.7	4.2	4	4.			
Y'Israel B'Aliya	1.7	1.7	1.7	5	4.7	4.6			
Y'Israel Beteinu				3.3	2.9	2.8			
Tsomet							6.7	9.3	8.3
Moledet							2.5	2.8	2.5
Center Party				5	4.7	4.6			
Arab Democratic party							1.7	2.8	2.5

Table A4 – Shapley and Banzhaf Indices in Israel (close elections)

	1996			1988		
	Seat %	Banzhaf %	Shapley %	Seat %	Banzhaf %	Shapley %
Likud	26.7	22	26.2	33.3	22.8	27.9
Labor	28.3	25.7	29.4	32.5	21.1	26.4
Shinui			0	1.7	3	2.4
Shas	8.3	10	8.7	5	8.3	6.8
NRP	7.5	8.9	7.7	4.2	7.2	5.9
Meretz	7.5	8.9	7.7			
Yahadut Hatorah	3.3	3.8	3.1			
Hadash-Ta'al	4.2	4.7	3.9	3.3	4.7	3.8
United Arab List	3.3	3.8	3.1			
Y'Israel B'Aliya	5.8	6.6	5.6			
Tsomet			0	1.7	3	2.4
Moledet	1.7	1.8	1.5	1.7	3	2.4
The Third Way	3.3	3.8	3.1			
Arab Democratic party				0.8	0.9	0.7
Agudat Y'Israel				4.2	7.2	5.9
Ratz				4.2	7.2	5.9
Tehiya				2.5	3.9	3.2
Mapam				2.5	3.9	3.2
Degel Hatorah				1.7	3	2.4
Progressive List for Peace				0.8	0.9	0.7

Table A5 – Shapley and Banzhaf Indices in Israel 1977-84

	1984			1981			1977		
	Seat %	Banzhaf %	Shapley %	Seat %	Banzhaf %	Shapley %	Seat %	Banzhaf %	Shapley %
Likud	34.2	17.5	23.3	40	27.8	30.6	35.8	41.7	40.9
Labor	36.7	27	31.2	39.2	24	26.8	26.7	17.4	19.5
Shinui	2.5	4.8	3.9	1.7	3.9	3.3			
Shas	3.3	6.2	5.1						
NRP	3.3	6.2	5.1	5	14	12.7	10	12.6	10.8
Yahadut Hatorah	2.5	4.8	3.9			0			
Hadash-Ta'al	3.3	6.2	5.1	3.3	8.2	7.3	4.2	2.8	3.3
United Arab List							0.8	0.7	0.8
Agudat Y'Israel	1.7	3.4	2.7	3.3	8.2	7.3	3.3	2.6	2.9
Ratz	2.5	4.8	3.9	0.8	1.9	1.6	0.8	0.7	0.8
Tehiya	4.2	8.7	7.2	1.7	3.9	3.3			
Progressive List for Peace	1.7	3.4	2.7						
Morashi-Po'aeli Agudat Israel	1.7	3.4	2.7				0.8	0.7	0.8
Tami	0.8	1.3	1.0	2.5	6.2	5.3			
Kach	0.8	1.3	1.0						
Ometz	0.8	1.3	1.0						
Telem				0.8	1.9	1.6			
Democratic Movement for Change							12.5	16.7	15.7
Plato Sharon							0.8	0.7	0.8
Shlomzion							1.7	1.4	1.5
Mahaneh Sheli							1.7	1.4	1.5
Independent Liberals							0.8	0.7	0.8

Table A6 – Cabinet and Deputy Minister Representation 2001-3

	2003				2001		
	Posts	%Coalition Knesset seats	ratio		Posts	%Coalition Knesset seats	ratio
Likud	16 (55.9%)	55.9	0.99		10 (28.6%)	25.6	1.12
Labor					11 (31.4%)	35.2	0.89
Shinui	6 (20.7%)	22	0.94				
Shas					9 (25.7%)	23	1.12
Ha-ichud Ha-leumi	3 (10.3%)	10.2	1.01		1 (2.9%)	5.3	0.55
NRP	3 (10.3%)	8.8	1.17				
Yahadut Hatorah					1 (2.9%)	6.8	0.43
Am-Echad					1 (2.9%)	2.8	1.04
Y'Israel B'Aliya	1 (3.4%)	3	1.13		1 (2.9%)	8.1	0.36
Y'Israel Beteinu					1 (2.9%)	5.3	0.55

Table A7 – Cabinet and Deputy Minister Representation 1996-9

	1999			1996		
	Posts	%Coalition Knesset seats	ratio	Posts	%Coalition Knesset seats	ratio
Likud				16 (61.5%)	48.6	1.27
Labor	14 (45.2%)	37.2	1.22			
Shas	7 (22.6%)	24.3	0.93	4 (15.4%)	15.1	1.02
NRP	2 (6.5%)	7.2	0.9	3 (11.5%)	13.7	0.84
Meretz	3 (9.7%)	14.2	0.68			
Yahadut Hatorah				1 (3.8%)	6	0.63
Y'Israel B'Aliya	2 (6.5%)	8.6	0.76	1 (3.8%)	10.6	0.36
Center Party	2 (6.5%)	8.6	0.76			
The Third Way				1 (3.8%)	6	0.63
Other	1 (3.2%)	0				

Table A8 – Cabinet and Deputy Minister Representation 1988-1992

	1992			1990			1988		
	Posts	%Coalition Knesset seats	ratio	Posts	%Coalition Knesset seats	ratio	Posts	%Coalition Knesset seats	ratio
Likud				16 (55.2%)	63.3	0.87	12 (42.9%)	42	1.02
Labor	17 (63%)	71	0.96				12 (42.9%)	41	1.05
Shinui	1 (3.7%)	0					1 (3.6%)	2.1	1.71
Shas	4 (14.8%)	9.7	1.65	3 (10.3%)	9.5	1.08	2 (7.1%)	6.3	1.13
NRP				3 (10.3%)	8	1.29			
Meretz	4 (14.8%)	19.3	0.77						
Tsomet				1 (3.4%)	3.2	1.06			
Agudat Y'Israel				3 (10.3%)	8	1.29	1 (3.6%)	5.3	0.68
Degel Hatorah				1 (3.4%)	3.2	1.06			
Tehiya				2 (6.9%)	4.8	1.44			

Table A9 – Cabinet and Deputy Minister Representation 1977-1984

	Posts	1984 %Coalition Knesset seats	ratio	Posts	1981 %Coalition Knesset seats	ratio	Posts	1977 %Coalition Knesset seats	ratio
Likud	13 (44.8%)	41.9	1.1	22 (75.9%)	84.2	0.9	12 (66.7%)	61.4	1.1
Labor	12 (41.4%)	44.9	0.9		0			0	
Shinui	1 (3.4%)	3.1	1.1		0			0	
Shas	1 (3.4%)	4	0.9		0			0	
NRP	1 (3.4%)	4	0.9	4 (13.8%)	10.5	1.3	3 (16.7%)	17.2	1
Agudat Y'Israel	1 (3.4%)	2.1	1.6						
Tami				3 (10.3%)	5.3	1.9			
DMC							3 (16.7%)	21.4	0.8

Footnotes

[1] Survey results suggest that voters for religious parties favor a very hardline policy on national security (Yuchtman-Yaar and Hermann 2000; Hazan 2000). Furthermore, the religious parties supported Netanyahu for (directly elected) Prime Minister in 1996, including Shas, which had been in the previous Labor-led government.

[2] See Buchanan and Tullock (1962) for a defense of vote trading. See also Miller (1983) and Katz (1997) for conceptions of democracy based on multi-dimensional compromise.

[3] Strictly speaking the similarity measure is the number of years two parties have been in government together as a proportion of the number of years the longer serving party has been in government. The Kruskal method was used with two dimensions and Euclidean distance. See Kruskal and Wish (1978).

[4] Cabinet seats are counted at the beginning of each government and do not include the honorary post of Deputy Prime Minister.