# Social Cleavages among non-Arab Voters:
# A New Analysis

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# Abstract

Previous studies of electoral behavior in Israel have demonstrated the importance of ethnic and religious cleavages while finding little evidence for class divisions as a factor structuring politics and predicting voter preferences. We challenge this empirical consensus by employing three different methodologies: a reanalysis of standard survey data; ecological analysis of aggregate election and census results; and multilevel analysis of pooled individual and aggregate data. All three methods attribute a major role to class along with other social cleavages. They vary however in their answers to the question of whether class effects are independent of ethnicity and religion or conditional upon them.

Several factors explain the divergence between our findings and prior research. The impact of class on voting is stronger in ecological than survey correlations because (a) the higher quality of aggregate data allows more sophisticated conceptualization and measurement of class; (b) class (and other social variables) are in fact grounded in communities as well as individuals; and (c) unlike surveys, comparisons across communities capture local biases as well as the effects of individual differences. The paper illustrates the power of multilevel analysis to operationalize the analytical distinction between effects at the two levels of analysis, individual voters and their local mileux.

The conclusion reflects on the Israeli paradox of class voting without traditional class politics. We speculate that this paradox is explained by the interplay between class, ethnicity and culture under the specific conditions that pertain in the Israeli case. The class position of Ashkenazim and Mizrachim, and the contemporary surge of identity politics, are interconnected-not alternative-foundations of class voting among non-Arab Israelis.

## Introduction

The key divisions between political parties, and the key fault-lines of political discourse in Israel, are closely aligned with the country's most explosive social cleavages. The most visible of these cleavages are those between Arabs and Jews, and among Jews, between Mizrachim vs. Ashkenazim and religious vs. secular. Studies of electoral behavior in Israel show that attachment to competing collective identities and positions on key political issues are more powerful predictors of voter preferences than ethnicity and religion. Since the distribution of these attachments and identities itself parallels the main social cleavages the cleavage structure is of double importance, influencing voting both directly and indirectly. What is puzzling about the Israeli case is the apparent irrelevance or near-irrelevance of class divisions as a factor structuring politics and predicting voter preferences.

This article engages in three different types of empirical analysis of partisan choice among non-Arab voters in Israel.[1] Using methods and data that have rarely or never been exploited in Israel, as well as modified versions of the standard multivariate analysis of survey data, we offer an empirical reassessment of voter behavior that departs substantially from previous research by attributing a major role to class along with other social cleavages.

In this we take issue with the authoritative literature on the politics of social cleavages in Israel. For instance, based on a systematic comparison of election surveys carried out over the last three decades Michal Shamir and Asher Arian recently concluded that the distinction between secular and religious Jews is the predominant social division, followed by the ethnic split between Ashkenazim and Mizrachim. They describe "the economic cleavage" as "weak to begin with" (Shamir and Arian 1999:270), and report multiple regressions predicting the

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[1] Given the significant number of non-Jewish Israeli citizens from the former Soviet Union in contemporary Israel, it would be inaccurate to describe our research population as "Jewish voters". See (Lustick 1999).

division of votes between the right and left bloc that yield insignificant results for socioeconomic indicators in most periods.

The apparent irrelevance of class to voting flies in the face of both evidence of the persistence of class voting in other societies (Manza, Hout, and Brooks 1995) and everyday knowledge about Israel. Political commentators and rank-and-file citizens alike are well aware of the sharp polarization of voting between North and South Tel Aviv, between exclusive neighborhoods like Saviyyon and peripheral localities like Ofaqim—in short, between the well-to-do and the poor. True, this polarization encapsulates ethnic as well as class differences, but it is hard to believe that class voting per se is merely epiphenomenal.

It cannot be denied that most political parties in Israel fail to articulate class cleavages and that there is a marked absence of subjective class consciousness among voters.[2] Sammy Smooha has noted that even though "social stratification has increased and crystallized over the years", class consciousness in Israel remains weak and "inequality is still a nonissue" (Smooha 1993:313,315). Smooha attributes the absence of class politics in Israel to the overshadowing of class by ethnic and national cleavages. In addition he notes several factors that serve to weaken distributional conflicts (the inflow of gifts and cheap labor from outside and a successful welfare policy), and he also points to "contradictions … [between] the social and ideological bases of the major parties": the "socialists" represent mainly relatively advantaged Ashkenazim, the "right" is disproportionately supported by the Mizrachi lower classes, and the "Communists" appeal almost exclusively to Arab citizens.

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[2] Professors Arian and Shamir kindly afforded the author early access to the 1999 pre-election survey on which their own contributions to this volume are based. The survey replicates a longstanding pattern in Israel: the overwhelming majority of respondents classified themselves as middle class, and there was no difference in voting preference between the "lower middle" and "upper middle" subdivisions. In addition, previous research seems to show that economic issues play a secondary role at best in structuring public opinion and voter preferences (e.g. Nachmias and Sened 1999:271; Shamir and Arian 1999).

We agree with Smooha's analysis but not its implication that there can be no class voting in Israel because there is no class politics. Logically speaking, the absence of the latter does not preclude the existence of the former. On the contrary, as Brooks and Manza (1997) have pointed out, class voting and class politics are theoretically distinct and they need not (and in the American context do not) covary empirically. One obvious possibility is that in Israel class interests and cleavages have been submerged in—but not eliminated by—the politics of ethnicity, nationalism and collective identity. Historically Zionism and the national conflict, and related peculiarities of the Israeli labor movement, left a vacuum of political agents willing and able to speak for the disadvantaged in the language of class conflict. Despite this, the political alienation of the Mizrachim from the "labor establishment" and their gravitation towards the hawkish right could be seen as reflecting a hidden agenda of class conflict (e.g. Swirski 1984; Farjoun 1983; Peled 1989).

This view has been challenged by scholars who see the ethnic vote as a reflection of status or identity politics more than class politics (Herzog 1985; Shapiro 1991). The Mizrachim are seen from this perspective as struggling for recognition as social and political equals to the Ashkenazi founders and their descendants. For instance, Shas proposes a vision of Israeli society and its collective identity that is more congenial to Mizrachi values and lifestyles than the Ashkenazi model of a democratic secular state at peace with its neighbors and closely integrated into western culture and the liberalized world economy.

This article will not take up this controversy at length, although in the conclusion we will suggest that the two perspectives are not mutually exclusive but complementary. The success of Shas (and by the same token, the polarization between Netanyahu and Barak) in the 1999 elections bears witness to the *interaction* of class politics and identity politics. Indeed, developments around the world point to the association of reactionary sentiments with the losers from economic and cultural globalization, and vice versa (e.g. Beyer 1994; Rodrik 1997). In similar fashion we believe that voting behavior in contemporary Israel reflects the substantial overlap between ethnicity, rival subcultures and collective identities, and class interests.

Nevertheless, the central preoccupation of the present article is the foundational one of documenting the role of class in voting behavior relative to, and in conjunction with, other social cleavages. The middle section of the paper approaches the problem more or less in the conventional fashion, using survey data to connect the social characteristics of individual voters with their voting intentions. However this is preceded by an ecological analysis of aggregate data on the vote distributions and socioeconomic features of many hundreds of small geographical units. As an alternative to the survey approach, ecological analysis has a number of strengths and weaknesses. But we recommend it for an additional reason: since the variables of interest (including class) are actually situated at the local as well as the individual levels, local context can be expected to exert an independent influence on voter behavior. The third and final empirical section of the paper presents the first attempt that we are aware of to apply multilevel analysis—a tool for distinguishing between individual and contextual effects—to the study of voting in Israel. Because of data limitations the results of the multilevel analysis are empirically tenuous, despite their analytical power. But as we shall see, some of these results converge so strongly with the findings of the ecological and survey analyses that they provide an irresistible (as well as long overdue) challenge to the neglect of class by students of political behavior in Israel.

## Part 1: Aggregate data analysis

A typical Israeli election is accompanied by the following cycle of scientific or pseudo-scientific activity. In the first, pre-election phase experts hired by the media and the parties conduct polls that "entertain" their readers and offer campaign guidance to candidates. In the second phase, that begins on the night of the election and is exhausted a few days or weeks later, straw polls and then actual polling allocate responsibility to specific voting publics for the election results. The roles of Arabs, Jewish slum-dwellers, Haredim, yuppies, settlers, and so forth are inferred from how particular towns, neighborhoods or polling stations actually voted. The third phase, well after the election flurry is over, is when scholarly activity steps up. At this point analysis of election results is largely discarded in favor of information collected from individual voters in pre or post-election polls. Here and there authors refer to linkages between aggregate

voting patterns and the characteristics of the localities where they occur, but this is exceptional. For instance, except for the first edition, rarely has an ecological analysis appeared in the 8 volumes published in the *Elections in Israel* series.[3]

In fact, if we scratch the surface of the Israeli literature it is possible to find several important contributions of ecological analysis (especially Diskin 1991; Gonen 1984; Matras 1965), although their impact on the discipline has been limited. This is unfortunate, if only because geographical and ecological analysis opens a unique window onto the historical evolution of voting and its social correlates (Smith 1969; 1972; 1977). Particularly noteworthy is the fact that where ecological studies have looked for class voting, they have found it in strong doses. Perhaps most remarkable is the neglect of a major study of the 1988 elections by DellaPergola, which concluded from a statistical analysis of 810 urban Jewish localities that "social class is significantly stronger than ethnic background as a correlate of party preferences" (DellaPergola 1991:101).

To investigate the association between politics and places in the 1999 elections, we begin in Table 1.1 by presenting voting results for thousands of small localities known as Statistical Areas, classified by either types of locality or their social composition. Two outcomes are shown: the Prime Ministerial ballot and support for Shas in the Knesset vote. It is evident that in the contest between Netanyahu and Barak, certain types of communities voted with extreme homogeneity: 90% of kibbutz voters supported the candidate of the left, while at least 80% of Jews living in the Occupied Territories and Haredi neighborhoods[4]

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[3] This generalization does not hold for articles on the Arab vote, since until recently survey data was not available. The founding volume of the series (Arian 1972), on the 1969 elections, included articles by Herbert (Hanoch) Smith and Moshe Lissak based on ecological data alongside the first fruits of the American survey methodology that Arian (1973) introduced to Israel. Since then, apart from sporadic and rudimentary references to aggregate results, an article on the farming sector in the 1981 volume and another on the Kach party in the 1984 volume are the only instances where authors relied on ecological analysis.

[4] The criteria used to define the categories distinguished in Table 1.1 are discussed below. It should be stressed that identification of Haredi neighborhoods is problematic,

supported the candidate of the right. Class and ethnic voting were both pronounced, especially for the Shas party. Support for Shas in predominantly Mizrachi communities outnumbered its support in Ashkenazi localities by roughly six to one. A similarly wide gap separated the most and least affluent quintiles of Statistical Areas.

Table 1.1: **Vote by type of location**

|  | **Netanyahu** | **Shas** |
|---|---|---|
| National total (Jewish) | 49 | 14 |
| Type of settlement |  |  |
| Kibbutzim | 10 | 1 |
| Moshavim: Ashkenazi-dominant | 22 | 2 |
| Development Towns | 60 | 22 |
| Moshavim: Mizrachi-dominant | 68 | 29 |
| Settlements (occupied territories) | 83 | 12 |
| Locally "dominant" social groups |  |  |
| Ashkenazim | 33 | 5 |
| "Russians" | 51 | 11 |
| Mizrachim-North Africa | 67 | 31 |
| Mizrachim-Asia | 68 | 29 |
| Haredim | 78 | 20 |
| Class composition* |  |  |
| Affluence: highest 20% | 25 | 4 |
| Affluence: lowest 20% | 68 | 28 |

Aggregate results for 1,968 predominantly Jewish Statistical Areas (except for class composition, which excludes kibbutz and Haredi localities, n=1,491). Definitions of the variables appear later in the text.

Spectacular as these findings are, sophisticated consumers of data will quite rightly pose tough questions about the measurement and meaning of spatial relationships between voting and voter characteristics. Before proceeding to a more systematic analysis of geographical linkages between social background and the vote in the 1999 elections, we therefore ask the reader to be patient as important methodological issues are discussed.

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since it rests on a rough quantitative criterion that most probably causes understatement of the homogeneity of the Haredi vote.

### The uses and limits of ecological analysis

The basics of ecological correlations are simple enough. Across cities, polling stations or other geographical units the researcher calculates mean values for (a)the distribution of votes and (b)presumed determinants of voting, and then carries out some test of association between a and b. The key question is how to interpret such associations, and there are two quite different answers. The results may be an indication of what determines individual differences in voting, but they may also show how the features of the localities where people live affect the political choices that they make.

For those who resort to ecological analysis simply because surveys are not feasible or not reliable, the goal is *ecological inference*—to infer the behavior of individuals from aggregate data. Tempting as this agenda is—especially for analyzing the behavior of groups like the Haredim or parties like Shas that tend to be badly under-sampled in opinion polls[5]—it is impossible to know for certain (except in a totally segregated society) whether or not associations that hold across areas also hold across individuals.[6] Consider a simple example. Suppose we find that support for Shas increases as the proportion of Mizrachim in voting districts rises. This might be because most Mizrachi individuals are more likely than most Ashkenazi individuals to vote for Shas, but that need not be the case.

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[5] Yaar and Herman (1999) have recently adopted an innovative approach to analysis of the Shas vote by pooling data from multiple surveys. Their aggregation of nearly 17,000 respondents (June 1996 to April 1999) yielded 7% who were declared Shas supporters—definitely an improvement on the 3% caught in the net of the 1999 national pre-election survey carried out by Shamir and Arian, but still far short of the approximately 14% of Jewish voters who actually voted for Shas.

[6] For an excellent brief overview of the "ecological fallacy", see Freedman (1999). Recent technical innovations by King (1997) are alleged to have overcome the main difficulties with ecological inference, but King's claims have been strongly disputed by his critics (Tam Cho 1998; Freedman, Klein, Ostland, and Roberts 1998). It may be possible using King's method to narrow the range of plausible ecological inferences, but the potential for grievous error apparently remains.

It is even possible that within voting districts there is actually no ethnic difference in the political preferences of individual voters.

Ecological inference could be erroneous in this case for either of two reasons. One type of error would occur if all voters conform to the preferences of the dominant group, e.g. if in Mizrachi areas even Ashkenazim vote Shas. The second possibility is that some other influence on voting which varies by locality is closely correlated with ethnic composition, e.g. the more Mizrachim the poorer the area and hence the higher the Shas vote. The first error points to the possible importance of the social composition of localities in altering social and political life: in other words, "the whole is greater than the sum of its parts". The second implies a spurious effect of ethnicity on voting due to its correlation with a variable that genuinely determines individual voting behavior.

These issues have been reviewed by Huckfeldt and Sprague (1993), who point out that the same problems of inference are posed for inferring individual behavior from the individual-level data generated by surveys.[7] Hence, *insofar as the effects of social cleavages differ between the individual and aggregate levels, neither surveys nor ecological analyses are immune from inferential fallacies.* For the purpose of ecological inference to the individual level, our confidence increases if the correlations are across relatively homogeneous units (e.g. units made up predominantly of either Ashkenazim or Mizrachim), but even then the results must be regarded as no more than promising hypotheses.

An alternative use of ecological correlations is in the search for contextual effects on voting. Theoretically it is reasonable to assume that, to a significant extent, social cleavages develop and become politically meaningful through social interaction (Huckfeldt and Sprague 1995). Ethnicity, class or religion are lived collectively, they are not commodities acquired in an atomistic marketplace; and neither are political preferences merely the product of the "tastes" of individual

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[7] Suppose that as in the previous example, *areas with more Mizrachi voters* generated a higher Shas vote but that *within each* area Mizrachi and Ashkenazi voters had the same preferences. A national sample survey would reveal a strong but non-existent effect of ethnicity on individuals' propensity to vote for Shas.

political consumers. Some (obviously not all) of the relevant collectivities are local. This does not mean that all political behavior is dictated by conformity with the majority (or by reaction against it). However, two types of effect are plausible. Context may condition the political effects of individual differences (e.g. individual Mizrachim might be more drawn to Shas if the majority of their neighbors are Mizrachim or if Shas has a strong local presence in their town or region). Alternatively, contextual effects may complement individual-level ones. For example the economic opportunity-structures that people face in the places where they live may be as salient, if not more salient for their political choices, than their personal economic standing.

But how to infer contextual effects from ecological correlations? The same sorts of problems that endanger inferences to the individual level arise here too. Take the correlation between ethnicity and the vote across Statistical Areas. Without individual-level data we cannot know whether it represents anything more than the aggregation of ethnicity's impact on political preferences at the individual level. Thus, *just as uncertainty about contextual effects gets in the way of using ecological correlations to make inferences to the individual level, uncertainty about individual behavior hampers drawing conclusions about contextual effects*. As we shall explain in the final section of the paper, the ideal solution—which however requires both unconventional data and non-standard statistical methods—is to simultaneously analyze individual and aggregate data for the same localities.

## *Prerequisites for ecological analysis*

Despite the problems of interpreting ecological correlations, both the suggestive findings of previous research and the strength of the patterns presented in Table 1.1 suggest it would be a grave mistake to leave them out of our methodological toolkit. However, the operational prerequisites for ecological analysis of voting are far from trivial. Three specific challenges must be met.

1. Creation of a merged dataset comprising both voting and social cleavage variables averaged across geographical units. Smaller units should increase our confidence in the results.[8]

2. Construction of valid measures of social cleavages—in our case, the ethnic, class and religious composition of geographical units.

3. Verification of ecological segregation between social groups. Ideally there should be social homogeneity within geographical units and differentiation between them.

## 1. Merged dataset

Political and demographic data for Statistical Areas (hereafter SA's) were obtained by merging geographical summaries of data from the 1995 census with the detailed results (by polling stations) of the 1999 elections. SA's are as close as Israeli government statistics get to "neighborhoods" although their size varies. Some of them are entire small communities while others are fine subdivisions of towns or cities. The average number of eligible voters in the SA's that we analyzed was just over 1,500. Most of them (some 80%) comprised between 200 and 3,000 adults.

Our working dataset contained 1,968 Statistical Areas after the following exclusions: (a)Arab localities or localities with significant Arab minorities, (b)SA's that were very small or suspected of being non-residential, and (c)SA's that could not be matched in the census and election files.[9] In addition, except for the

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[8] *Ceteris paribus*, small geographical units are more homogeneous (increasing our confidence in inference to individuals) and more "intimate" (possibly increasing the likelihood of finding powerful social and political networks—although compare Wellman1999).

[9] The following limitations were imposed on the size of the SA's included in our working dataset: at least 30 households, 60 adults and 60 eligible voters, and an average of no more than 3 adults per household. SA's populated by a significant proportion of non-Jewish residents were identified by cumulatively applying the following criteria: "Arab localities" according to data on religion and type of locality (*tsurat yishuv*) supplied by

kibbutz averages shown in Table 1.1 all of our analyses exclude kibbutzim (272 SA's) because of difficulties in measuring and interpreting their class composition.

## 2. Valid cleavage measures

<u>Ethnicity</u>: It is now widely understood that the "primordial" distinction between Ashkenazim and Mizrachim which this and other studies of ethnic voting take for granted is to a great extent the result of processes of economic stratification, social closure and political construction that occurred in Israel *after* immigration (Smooha 1978; Bernstein and Swirski 1982; Herzog 1985). Nevertheless, in the Israeli discourse on *edot* (ethnic communities) "Ashkenazi" and "Mizrachi" (or "Sephardi") are taken-for-granted categories. This discourse was constructed in part by the dichotomous treatment of the *edot* in official statistics, in which they are defined in biological and geographical terms (typically, the continent of origin of immigrants or their fathers).

Our research also necessarily focuses on mainly on the conventional, broad categories of *Ashkenazim* (Jews born in Europe or the Americas or whose fathers were born there) versus *Mizrachim* (Jews born in North Africa or the Middle East or whose fathers were born there). We did make one modification to the operational definition of Ashkenazim. Because of the distinctiveness (including political behavior) of the recent wave of "Russian" immigration to Israel, we created a separate category for immigrants from the former Soviet Union who arrived from 1989 onwards. In addition, where feasible we checked for the presence of internal differentiation within the Ashkenazi and Mizrachi groups. Despite indications in previous literature that such differentiation is politically consequential (Matras 1965; Ayalon, Ben-Rafael, and Sharot 1987), in the

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the Central Bureau of Statistics (hereafter CBS), and SA's in which 10% or more of the population lacked data on country of origin (which is not collected for Arabs). Readers interested in replicating or extending our analysis are advised that in November 1999 the CBS released an independently-constructed merged dataset similar to the one that we created.

ecological analysis to be reported here it was relevant only to the Shas vote, which was moderately stronger for Mizrachim from North Africa than from Asia.

In some of our analyses (including Table 1.1) we have classified SA's according to the *dominant* ethnic group, if there was one. Operationally group was defined as dominant if its had a plurality of at least 40% of the adult population. Using this criterion, 41% of SA's were dominated by Ashkenazim and 34% by Mizrachim. Dividing Mizrachim between "African" and "Asian" yielded dominance rates of 10% and 7% respectively. Only 3% of SA's were dominated by "Russians".

Religion: We inferred the religious complexion of SA's from three types of indicators. First, census data on the proportion of men who had studied in a Yeshiva at the post-secondary level. Second, the proportion of households that failed to turn in a census questionnaire. (The rationale for this indicator is that CBS officials are convinced that among Jews, most of the substantial phenomenon of non-cooperation with the 1995 census occurred among the ultra-orthodox.)[10] Third, we obtained data from the Ministry of Education on the distribution of male elementary school students between the three officially recognized streams of the state education system: secular, national-religious (*mamlachti-dati*), and orthodox-religious (*azmai*).[11] Unfortunately this information was available only for whole towns or cities (*yishuvim*).

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[10] After completion of the census, the CBS compared its database of respondents with the Population Registry of the Ministry of the Interior. For households missing from the census, data were imputed from administrative sources. Our census dataset includes a variable which records, for each SA, the proportion of households for which imputations were made—in effect, the rate of refusal.

[11] We are grateful to Aaron Benavot for suggesting this indicator. The data on the distribution of students between educational "streams" were obtained from a publication of the Ministry of Education, Culture and Sport: *Schools in Local Authorities in the School Year 1996/7* (in Hebrew; Jerusalem, 1998).

Consequently it is insensitive to neighborhood variations within these localities and is altogether unavailable for kibbutzim and moshavim.[12]

In view of this problem of missing data, two different indicators of religion are employed in our subsequent multivariate analysis of the social correlates of voting. The preferred measures (unavailable for nearly 500 SA's) are based on all three types of data, including the relative weight of the different educational streams. A factor analysis of these three variables revealed two clearly distinguishable dimensions, one tapping the presence of Haredim and the other loading high on the proportion of *dati* students in the school system.[13] As an alternative, we sacrificed the schooling data and aggregated the other two indicators (non-response and yeshiva education) into a single Haredi scale.[14]

Class: We need to discuss the measurement of class at greater length because it is in many ways more problematic than the other two social cleavages. Indeed, it is not unreasonable to conjecture that the relative insignificance of class in previous research on the social bases of voting in Israel may derive from inadequate theoretical formulations and poor empirical indicators. With few exceptions Israeli researchers have failed to problematize either their concepts or measures of class.[15]

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[12] School stream data are also not available for most Israeli settlements in the occupied territories.

[13] Factor analysis yielded a dominant factor (eigenvalue of 2.1) on which all variables except the proportion of *mamlachti-dati* students loaded highly, and a second factor (eigenvalue 0.9) on which only this factor loaded strongly. Standardized scores (z-scores) for these two factors were created after varimax rotation further sharpened the distinction between them.

[14] The Haredi scale was computed differently, by simply averaging standardized values of the non-response and yeshiva education variables.

[15] Notable exceptions are studies by Zloczower (1972) and Yatziv (1974). The former provided great insight into what is now a bygone era, the latter developed a complex theoretical formulation of class as shared fate but used an empirical indicator (housing density) with tenuous relevance to the theory.

Theoretically it is well known that there are a variety of competing conceptualizations of class. Most of them revolve around three potentially independent dimensions: production, consumption, and sectors. Approaches that focus on the sphere of production argue that class is about the work that people do and/or the conditions under which they work (including authority and rewards). This usually implies an occupationally-based definition of class categories (the two leading models are Erikson and Goldthorpe 1992; and Wright 1985). In practice, however, class is more often equated with consumption levels or capacities (e.g. housing conditions or income). Both occupations and consumption patterns may in fact be a basis (along with extra-economic criteria like race and "breed") for what Weber called "social closure" (Parkin 1979). Closure results in the formation of status cleavages that can cross-cut as well as reinforce class divisions. To further complicate matters, social scientists in a variety of fields have noted the presence of vertical or "sectoral" cleavages that complicate the horizontal divisions normally associated with class. Notably the role of the state as a factor in the economy and social policy may result in cleavages between sectors of employment or between different "housing classes" (Dunleavy 1979; Dunleavy 1980; cf. Svallfors 1999:206-8).

The Israeli class structure has specific peculiarities. Because of Israel's history of colonial settlement under unfavorable demographic, economic and political conditions, the state (and earlier, Zionist and communal institutions) played a decisive role in stratification (e.g. Rosenfeld and Carmi 1976). The state literally created both class positions and status groups, and the way that it distributed resources was critical to the formation of the opportunity structures that they faced (Shalev 1989). This was especially noticeable in the field of housing (Gonen and Hasson 1983; Lewin-Epstein, Elmelech, and Semyonov 1997; Rosenhek 1999). Meanwhile, in the occupational realm state and Histadrut-owned workplaces constituted a "bureaucratic sector" of employment where workers were shielded from labor market competition, especially the threat posed by cheap and unsubsidized Arab labor (Farjoun 1983; Stier and Lewin-

Epstein 1988). Despite this, studies of Israel have nearly all ignored the political implications of sectoral cleavages.[16]

While studies of class voting in the Western nations have typically focused on occupational class (see most recently Evans 1999), election surveys in Israel offer little or no information along these lines. Israeli researchers have relied more heavily on "socioeconomic status" (SES), which sociologists typically measure by combining education and income.[17] But SES blurs the difference between class and status, erases qualitative distinctions between different types and conditions of work and ignores the possibility of sectoral divisions. However, in the absence of more appropriate data, in Parts 2 and 3 of this paper we have no choice but to rely heavily on SES-type indicators. In contrast, the ecological analysis which follows is based on census data that make it possible to find at least tentative empirical referents for the three dimensions of class structure.

There is a further reason to expect *a priori* that ecological correlations might generate more meaningful class effects than survey data. As remarked earlier, the local level is liable to be where class divisions are actually made and lived. This is especially true in the Israeli context, where the formative role of the state in stratification was accompanied by profound spatial biases. Inferior life-chances were institutionalized into the employment and housing conditions of both the periphery and poor neighborhoods in the larger cities (Yiftachel 1997; Lipshitz 1996). Given that class inequality is so clearly embedded in unequal local opportunity structures, we expected that geographically-based economic indicators would hang together in coherent patterns. Specifically, we expected to

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[16] The exceptions are Hasson's (1983) analysis of protest politics and Burstein's (1978) little-known study of the 1969 elections.

[17] The most comprehensive study of SES in Israel is Kraus and Hodge (1990). Ben-Porat (1989) and Yaish (1999) are rare examples in stratification research of utilization (respectively) of the Wright and Goldthorpe class schemas. The election studies carried out by Michal Shamir and Asher Arian used income, education and housing density to represent "the economic cleavage" (Shamir and Arian 1999:270).

find high correlations *within* the three main economic cleavages (production, consumption, and sectors) but weak correlations *between* them.

Guided by this hypothesis, we utilized factor analysis on variables culled from the 1995 census. After some experimentation we selected 10 indicators, averaged for well over 1,500 Statistical Areas (after excluding kibbutzim). In addition to income, housing density and education, they include (1)four direct indicators of consumption standards (ownership of cars and other consumer goods), (2)two measures of the occupational and sectoral composition of jobs,[18] and (3)one indicator of state intervention in housing.[19] A principal component factor analysis yielded three factors, collectively accounting for 70% of total variance, that passed the conventional standard of having eigenvalues greater than 1. After varimax rotation—which aims to maximize the distinctiveness of each factor—we obtained the results in Table 1.2.

Table 1.2: **Three dimensions of class (rotated factors)**

|  | **Affluence** | **Work** | **Poverty** |
| --- | --- | --- | --- |
| % housholds with dishwasher | **0.84** |  | -0.39 |
| Cars per household | **0.83** |  | -0.28 |
| Salaried income per household | **0.75** | 0.45 | -0.24 |

[18] In constructing indicators of the local job market we were limited to single-digit classifications of occupations and economic branches (these and other limits were imposed by the CBS in order to preserve the anonymity of respondents in small SA's). Our first indicator, "proletarians", is the proportion of the employed who have manual occupations and work in manufacturing, construction or agriculture. The second indicator, "public professionals", is the proportion with technical, professional or managerial occupations who work in social services (health, education, welfare), public services or community services. As well as honing in on different ends of the occupational scale, these indicators also have a sectoral component (private vs. "bureaucratic").

[19] The housing indicator is the proportion of households living in public rented dwellings, which are characterized by low construction standards and low market value (Werczberger 1995).

| | | | |
|---|---|---|---|
| Persons per room | **-0.73** | -0.18 | -0.13 |
| % employed in "proletarian" jobs | -0.15 | **-0.85** | |
| % in "public-professional" jobs | | **0.80** | -0.18 |
| % aged 25-44 with college degree | 0.47 | **0.64** | |
| % housholds with washing-machine | 0.14 | -0.15 | **-0.85** |
| % households with phone | | 0.27 | **-0.75** |
| % public rental housing | -0.19 | -0.32 | **0.58** |
| % of total variance | 28.1% | 22.1% | 19.6% |

Data for 1,552 predominantly Jewish Statistical Areas, excluding kibbutzim. Principal components analysis after varimax rotation with Kaiser normalization. Statistically insignificant coefficients omitted, coefficients greater than 0.5 are in bold. For definitions of "proletarian" and "public-professional" jobs, see note 18.

As anticipated, there is a clear distinction between the consumption and production spheres. The first and strongest factor, which we have labeled *affluence*, represents living standards. The second factor, labeled *work*, is dominated by indicators of the two quite different employment contexts included in the analysis: upper white-collar occupations in the public services, and blue-collar occupations in production. The third and final factor is more difficult to interpret. It loads heavily on two very basic consumer goods (telephones and washing-machines) rather than the higher-end items (cars and dishwashers) associated with the first factor. Telephones in particular are so basic to contemporary lifestyles that areas in which their possession falls significantly short of being universal suffer from a form of poverty that is apparently distinct from the extent to which a locality participates in consumer affluence (captured by the first factor).[20] The association of the *poverty* factor with the prevalence of public rental housing presumably reflects the characteristic significance of the

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[20] There are only 6% of SA's (excluding kibbutzim) in which telephones are present in fewer than 90% of households.

welfare state for the Jewish poor.[21] Alternatively, public housing may hint at the existence of housing classes whose effect would be more clearly seen outside of the factor analysis.

We evaluated this issue, as well the overall plausibility of the factor analysis, by computing bivariate correlations between the three factors (and public housing) and key ethnic and political variables. The results confirmed that the consumption and occupation factors are meaningful: they have predictable correlations (most in the range .5-.7) with the proportion of Ashkenazim, Mizrachim and "Russians" and with voting for Netanyahu and Shas. The poverty factor performs poorly, but public housing alone exhibits correlations with the ethnic and political variables that are almost as strong as the affluence and work factors. Therefore, in later analyses public housing is substituted for the poverty factor.

## 3. Ecological segregation

As noted earlier, for ecological analysis to yield plausible generalizations, whether about individual or contextual effects, it is desirable that the geographical units of analysis be internally homogeneous and externally differentiated. It is common knowledge that Arabs and Haredim are spatially segregated in Israel. In relation to ethnic differences among Jews (Ashkenazim vs. Mizrachim) two competing overall views have long characterized the stratification literature. Some scholars have emphasized the crystallization

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[21] Unfortunately public housing is the only welfare state indicator available from the census. Government agencies have periodically published data collected by local authorities on various forms of social assistance and other indicators of socioeconomic conditions in localities (e.g. Central Bureau of Statistics 1996). However, this information is only collected at the locality level and is thus less targeted than our other data and not available at all for about a third of our SA's. Nevertheless, across the 904 SA's for which it is available, there is quite a high correlation (.60) between our poverty factor and the proportion of households receiving "welfare" (guaranteed minimum income) from the National Insurance Institute.

across different spheres,[22] and the reproduction over time, of the subordinate class position of Mizrachim (e.g. Nahon 1984; Cohen and Haberfeld 1998), while others have pointed to the scope and growth of class differentiation among Mizrachim (Ben-Rafael and Sharot 1991; Benski 1994). Our data on the extent of ecological segregation between the two major ethnic groups and its class correlates indicate that both perspectives are relevant.

According to the 1995 census the standard of living in Statistical Areas is very closely correlated with ethnic dominance. (As explained earlier, "dominance" means that a particular group has a demographic plurality and constitutes at least 40% of the adult population.) Table 1.3 shows that there are hardly any Ashkenazi-dominated areas in the poorest quintile of SA's and almost no Mizrachi-dominated areas in the richest quintile. Even when cut at the median, the affluence factor is closely linked to the ethnic composition of towns or neighborhoods. At the same time, dominance does not mean *exclusivity*. More than a fifth of all adult Jews (those not shown in Table 1.3) live in areas where neither Ashkenazim nor Mizrachim "dominate". Even in those SA's where one of the ethnic groups is dominant, roughly one in six inhabitants belongs to the minority group. Because Ashkenazim and Mizrachim are not fully segregated, even in areas where class and ethnicity are most closely "matched" we find a significant degree of pluralism. Our data show that 1 in 4 of the adults living in affluent Ashkenazi-dominated areas is a Mizrachi, and 1 in 7 of those in poor Mizrachi-dominated areas is an Ashkenazi.[23]

Table 1.3: **Spatial segregation by ethnicity and class**

| | Mizrachim dominant | Ashkenazim dominant |
|---|---|---|

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[22] Following Lenski's (1966) classic notion of "status crystallization", the term crystallization implies high correlations between different dimensions or spheres of stratification.

[23] This is a conservative estimate of the presence of Ashkenazim in poor Mizrachi areas, since Haredi-dominated areas were not included in the calculation.

Affluence factor

| | | | | |
|---|---|---|---|---|
| Mean | -.36 | | .87 | |
| No. of SA's - lowest 20% | 216 | | 10 | |
| No. of SA's - highest 20% | 21 | | 208 | |
| % of SA's above median | 24% | | 89% | |
| Percentages of ethnic groups | % Miz | % Ash | % Ash | % Miz |
| All SA's | 60% | 15% | 49% | 19% |
| Affluence lowest 20% | 64% | 11% | 47% | 17% |
| Affluence highest 20% | 51% | 23% | 50% | 17% |

Data for 1,491 predominantly Jewish Statistical Areas, Kibbutzim and Haredi-dominated areas excluded.

To summarize, ethnic "domination" is sufficiently pervasive that there are reasonable grounds for using ecological analysis to analyze the effect of ethnic composition on local voting preferences. At the same time not all areas are dominated by one ethnic group, and even in areas where one group is numerically dominant the other constitutes a significant minority. This poses a problem for making ecological inferences about the behavior of individuals, because we do not know whether or how the political preferences of members of the minority group are affected by those of the majority. At the same time, despite a striking degree of spatial overlap between ethnicity and class, they remain incompletely crystallized (and religion is even less so).[24] If ethnicity and class were spatially indistinguishable we would be dealing with a caste society and it would be impossible to disentangle their respective effects. We have seen that the overlap is strongest at the extremes of the class spectrum, but even there we observed the presence of minorities of the "unexpected" ethnic group. In sum, the distribution of both class and ethnicity is strongly skewed in space and they do tend to covary to some extent, yet segregation and crystallization are far from complete.

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[24] Complete "crystallization" would imply perfect correlation between the ethnic, class and religious composition of SA's. However, excluding kibbutzim we find the following bivariate correlations with percent Mizrachim: affluence factor -.42, *dati* factor .36, *haredi* factor .22 (the parallel correlations for percent Ashkenazi were markedly lower).

## Class and ethnic effects: graphical analysis

Chart 1.1 (appended to the paper) provides a graphical representation of the joint effects of ethnic and class composition on voting propensities across Statistical Areas. We recognize that other possible influences on voting, if taken into account, might alter the results displayed in the charts. We nevertheless find them valuable because they not only convey our key findings with great clarity, but also make it easy to compare different parties and to assess interactions between the effects of class and ethnicity on voting. The graphical analysis will be followed by multivariate regressions that provide more precise estimates of the effects of interest, controlling for other probable influences. However we have also endeavored to eliminate some possible confounding effects from the graphs, simply by excluding certain population groups. Specifically, we left out three groups that are characterized by both extreme partisan tendencies and distinctive ethnic or class composition—Haredim, kibbutzim and Israeli settlements in the occupied territories.[25]

Three of the graphs relate to the two key political contests: Netanyahu vs. Barak, and Likud vs. One Israel (the expanded Labour Alignment). The other three cover the parties that most directly challenged the two leaders: Shas on the right and Shinui and Meretz on the left.[26] To maximize their comparability all six graphs have been constructed identically. The y-axis measures the mean vote for a given party in SA's with a given class-ethnic combination, relative to the party's average in all the districts included in the analysis. The x-axis represents five equal divisions (quintiles) of the affluence factor. The relationship between class composition and the vote is shown separately for areas dominated by Mizrachim (black lines) and Ashkenazim (gray lines).

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[25] We also took care that "Russians" would not confound our indicator of Ashkenazi domination, which is based on the proportion of Ashkenazim in each SA *excluding* immigrants since 1989 from the former Soviet Union.

[26] The aggregate vote share for these candidates/parties in all 1,968 of the SA's in our basic dataset (including kibbutzim) was: Netanyahu/Barak 48.7/51.3%, One Israel 21.9%, Likud 15.7%, Shas 14.3%, Meretz 7.7%, Shinui 5.6%.

Four findings are especially remarkable.

1.  Ethnic voting is universal—in every case there is a sizeable gap between the gray and black lines. Results (not shown) which distinguished between Mizrachim of Asian and African origin revealed few differences between the two, except in the case of Shas. Areas dominated by voters of African origin awarded about 5 percentage points more support to Shas.[27]

2.  There is very clear evidence of class voting. As we move from poorer to richer areas support for the left rises, whereas it declines for Netanyahu and Shas. The sole exception is the Likud. The disappearance in 1999 of the Likud's longstanding advantage among the poor—especially the Mizrachi poor—undoubtedly reflects its losses to Shas.

3.  Voting for the two largest parties and their Prime Ministerial candidates provides no evidence of interaction between class and ethnic effects. Each variable appears to make an independent contribution to political preferences, unconditional on the other.

4.  On the other hand, interesting interaction effects are evident for the rivals of the two major parties, Shas and Meretz/Shinui. Simply put, Ashkenazim of all classes seem to refrain from voting Shas, but not all Mizrachim support it— that depends (inversely) on class. The interactions for Meretz and Shinui are in a sense reversed. In poor localities support for these parties is relatively low, almost irrespective of whether Ashkenazim or Mizrachim dominate ethnic composition. But a wider ethnic gap emerges (for Meretz it is especially wide) as we move up the class ladder.

As we know, care must be taken in drawing inferences from these findings to the individual level. The dramatic results for Shas furnish a good illustration. We suspect that the apparent tendency for poorer Ashkenazi areas to support Shas

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[27] The mean Shas vote in African-dominated SA's was 31% and in Asian-dominated it was 26%, a small difference compared to the gap between both of these groups and the Ashkenazi-dominated areas (where only 3.4% voted for Shas). The size of the African-Asian gap varied with affluence (by between 4 and 8 points), but not systematically so.

more than their richer counterparts is actually the result of strong support for Shas in these areas *on the part of the Mizrachi minority*. If we knew the true aggregate rate of support for Shas among Ashkenazi voters, it would very likely be more "flat" in relation to class than our chart suggests. The reverse error is also possible—that is, inclusion of the votes of minority Ashkenazi voters in Mizrachi-dominated areas probably exaggerates the tendency of more affluent Mizrachim to refrain from supporting Shas. Yet the results for Shas are so clear-cut that they also offer grounds for confidence: the precise slopes do not permit accurate inference to individuals, but the errors cannot be large enough to change their basic thrust.

## *Multivariate analysis*

Striking as the charts are, we would have more confidence in the results if they took into account influences on voting other than class and ethnicity. To take this further step requires moving into a multivariate statistical framework. The ecological regressions in Table 1.4 add several new features to the analysis of voting in the Prime Ministerial contest and for Shas. First, rather than relying on an arbitrarily chosen criterion of "dominance", we now measure ethnicity on a continuous scale.[28] Second, finer ethnic categories are utilized: African and Asian Mizrachim are treated separately[29] and the effect of "Russian" presence is

Table 1.4: **Ecological Regressions**

|  | **Netanyahu** | **Shas** |
| --- | --- | --- |

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[28] There might actually be some benefit to a dichotomous measure of ethnic representation if the effect of this variable on voting is nonlinear. We experimented with nonlinear and piecewise regressions and found that while they improved the fit, they did not substantially alter our conclusions.

[29] The major Oriental immigrations occurred during the first 15 years of statehood. In this period roughly 350,000 immigrants arrived from North Africa (nearly three-quarters from Morocco) and 300,000 from Asia (more than a third of them from Iraq and about one eighth each from Yemen, Iran and Turkey). See *Statistical Abstract of Israel 1998*, Table 5.3.

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Constant | 36.8*** | 31.5*** | -3.64* | .42 | .64*** | .01 |
| **Ethnicity** | | | | | | |
| % Africa | .30** | .45*** | .07* | .41*** | .43*** | .21*** |
| % Asia | .36*** | .45*** | .06* | .37*** | .32*** | .14** |
| Russian dominant | 2.35 | 5.80* | -1.23 | .33 | .38 | .42 |
| **Class** | | | | | | |
| Affluence factor | -9.44*** | -10.52*** | -3.18*** | -3.51** | -4.13*** | -1.85** |
| Work factor | -4.96** | -2.43* | -.59 | -2.18* | -1.54* | -.44 |
| Public housing | .15* | .15 | .04 | .12* | .07 | .05 |
| **Religion** | | | | | | |
| Haredi scale | | 10.77*** | 2.84** | | 2.43* | 1.19* |
| Haredi factor | 8.55*** | | | 2.75** | | |
| Dati factor | 4.06*** | | | .72 | | |
| **Type** | | | | | | |
| Settlements | 20.69** | 20.72*** | -.23 | -2.96 | -6.77* | -1.12 |
| Development Towns | -1.63 | -1.55 | .67 | -1.74 | -1.43 | -1.20 |
| Mizrachi Moshavim | | -4.90 | 2.58 | | -4.82* | -0.54 |
| **Vote in 1996** | | | | | | |
| Netanyahu 1996 (%) | | | .91*** | | | |
| Shas 1996 (%) | | | | | | .84*** |
| Adjusted r-squared | .87 | .81 | .96 | .77 | .73 | .86 |
| N | 1,204 | 1,689 | 1,678 | 1,204 | 1,689 | 1,678 |

* t>= 5  ** t>=10  *** t>=15

n is the number of (predominantly Jewish) Statistical Areas, excluding kibbutzim.

measured directly. Third, all three of the empirical dimensions of class are included. Fourth, we add indicators of the religious cleavage to the analysis of class and ethnic effects. Fifth, we test the effects of certain types of locality (such as "development towns") that are commonly believed to have effects on voting above and beyond their ethnic, class and religious composition. Sixth, in some equations we estimate the determinants of the vote swing between 1996 and 1999.

The models perform well. The proportion of explained variance is high–3/4 for Shas and more than 4/5 for Netanyahu (not including the change equations, Models 3 and 6, where R-squared is naturally even higher). Nearly all coefficients are significant at conventional levels, although this is hardly surprising given the large number of cases analyzed. Therefore, Table 1.4 reports much more demanding significance levels (beginning with one star for coefficients that are at least 5 times as large as their standard errors).[30] The effects of ethnicity, affluence, Haredi presence and location in the occupied territories ("settlements") all exhibit extremely high levels of significance.

Substantively the regression coefficients confirm the conclusions already reached by means of graphical analysis, but they add some interesting nuances.

**Ethnicity:** The effect of distinguishing between Mizrachim of Asian and African origin depends on which indicators are used for religion (and consequently, whether or not the dataset is truncated). It is clear that the Asia/Africa distinction makes little or no difference to the Prime Ministerial vote. But as might be expected, other things being equal the presence of North African immigrants and their children offers more of a boost to the Shas vote than residents of Asian origin. The "Russians" are more difficult to track because they are not a significant presence in most neighborhoods and only dominate a relatively small number of SA's.[31] Netanyahu definitely did better in neighborhoods where Russians are dominant.

**Class:** The regressions support our assumption that class is multidimensional: all three indicators had independent effects on voting. The affluence factor—the difference between "haves" and "have nots" in terms of consumption standards—had the strongest effect on voting. Yet the work factor—capturing the variations in the occupational, educational and (perhaps) sectoral

[30] The statistic known as *t* is the ratio of a regression coefficient to its standard error. A *t* ratio of 2 is the conventional threshold of statistical significance.

[31] In 70% of SA's, immigrants from the former USSR who arrived since 1989 constitute no more than 10% of the adult population. In only 112 SA's are Russians "dominant" by our criteria.

composition of employment—also influenced the ballot. Given that factor scores are standardized the results imply that an increase of one standard deviation in the affluence factor added about 10 points to the Barak vote, whereas a similar increment to the work factor added a quarter to a half of that amount. The influence of the third class indicator, the proportion living in public rental housing, was more modest.[32] In the results for Shas, the pattern is similar except that relatively speaking there is not such a big difference between the effect of affluence and the other two indicators of class composition.

**Religion:** Both indicators of Haredi presence had very strong and positive effects on the vote for Netanyahu. But Shas, whose origins in the mid-1980s were linked to internal disputes within the ultra-orthodox political camp, did not benefit to the same extent from the presence of Haredim in general. Similarly, whereas Netanyahu profited substantially from strong "national-religious" as well as ultra-orthodox streams, Shas did not. Presumably, this is because its schools, for which no reliable enrollment data are publicly available (Doron and Kook 1999:note 4), compete with the *mamlachti-dati* stream.

**Location:** In Table 1.1 we saw that Netanyahu's share of the vote among Israelis living in the occupied territories was 34 points higher than the national

Table 1.5: **The four leading determinants of aggregate voting, conditional on ethnicity**

|  | Netanyahu | | | Shas | | |
|---|---|---|---|---|---|---|
|  | All areas (*beta*) | Ashkenazi areas | Mizrachi areas | All areas (*beta*) | Ashkenazi areas | Mizrachi areas |
| Mizrachim | *0.43* | .59 | .54 | *0.65* | .27 | .43 |
| Affluence | *-0.39* | -6.7 | -11.0 | *-0.29* | -1.4 | -7.2 |
| Haredi | *0.38* | 17.1 | 7.3 | *0.17* | 2.5 | 5.3 |
| Settlements | *0.18* | 22.0 | 18.0 | *-0.11* | -5.2 | -5.4 |
| Adjusted R-squared | .81 | .80 | .61 | .72 | .62 | .56 |
| n (excl. kibbutzim) | 1,689 | 570 | 659 | 1,689 | 570 | 659 |

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[32] The public housing variable has a standard deviation of 10. The expected effect of an increment of this amount on the vote for Netanyahu would be 1.5 points.

Equations for Netanyahu replicate Model 2 and for Shas Model 5 of Table 1.4, but with Africans and Asians merged into a single "Mizrachim" variable. Separate regressions were run for Ashkenazi-dominated and Mizrachi-dominated areas. For these regressions we report metric coefficients (b), whereas the pooled regressions show standardized coefficients (beta).

(Jewish) average. Table 1.4 shows that even after controlling for the three key social cleavages, a gap of more than 20 points remains.[33] On the other hand, the above-average support for both Netanyahu and Shas in development towns appears to be fully explained by their class, ethnic and religious composition. The same is true for the predominantly Mizrachi moshavim—in fact on balance they actually *depressed* the vote for Shas and for Netanyahu, a testament perhaps to the lingering effect of Mapai's historic dominance of the settlement movements.[34]

Three questions remain to be answered by the regression analysis.

*(1) What is the relative importance of the different social bases of voting?* Given the unavoidable imprecision of most of our indicators and the presence of multicollinearity between ethnicity, class and religion in Israel (see earlier, e.g. note 24), it is impossible to reach clearcut conclusions on this point. However the indications in Table 1.5 are that, so far as the ballot for the premiership is concerned, all three cleavages had similar weight. For the Shas vote, on the other hand, ethnicity dominated followed by class and then religion. Of course such rankings would be of much less interest if the effects are interactive.

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[33] In contrast, the Shas vote in the settlements was *lower* than expected because some of the support that would otherwise have reached Shas was garnered by more nationalist parties, particularly the Likud and the *Ihud Leumi* (Benjamin Begin).

[34] It is important to bear in mind that this conclusion rests on the *net* effect of the Mizrachi moshavim. It does not contradict the fact that ethnicity profoundly conditioned the vote in these communities. Indeed, we saw in Table 1.1 that ethnic polarization of the vote was greater among moshavim than in other SA's. This tendency was apparently absorbed by the coefficient for ethnicity, which was higher in Model 2 (which includes moshavim) than Model 1 (which does not).

*(2)Can any significant interactions be detected?* Running the same regressions for Ashkenazi versus Mizrachi-dominated areas (Table 1.5) reveals that the vote in Mizrachi areas was substantially more sensitive to class differences. The graphical analysis has already shown that for Shas, the effect of class was strongly dependent on ethnicity. The multivariate analysis confirms this, while pointing to a similar (though weaker) effect on the contest between Netanyahu and Barak. There is also pronounced interaction between the effects of ethnicity and religion. Netanyahu's edge among Haredim was higher in Ashkenazi areas, yet—reflecting political rivalries among Ashkenazi Haredim—for Shas the advantage was greater in Mizrachi areas.

(3)*How similar or different are the patterns encountered in 1999 from the preceding election?* Models 3 and 6 of Table 1.4 address this issue by including the 1996 vote as a control variable, in effect redefining the dependent variable as the rise or fall in the relevant share of the vote between the two elections. Broadly speaking the results suggest that the same factors which determined the overall outcome in 1999 also affected the swings. There are strong indications of deepening ethnic polarization in 1999 (especially for the Shas vote), and the impact of the other two cleavages on vote swings was partly conditioned by ethnicity. Netanyahu actually gained support in 1999 among some Mizrachim and among Haredim (especially in Ashkenazi areas). But his already tenuous position in more advantaged areas weakened. In both Ashkenazi and Mizrachi locations Bibi lost ground as affluence rose. Both religion (positively) and class (inversely) also worked to raise the Shas vote, but these effects were far greater in Mizrachi areas.[35]

Consistent with the regressions, cross-tabulations not shown here reveal that relatively affluent and Ashkenazi-dominated SA's led the swing to Barak in 1999 and swam ever more strongly against the currents pulling towards Shas. By contrast, in less affluent and Mizrachi-dominated areas it was more common to

[35] Space does not permit presentation of all of the findings regarding trends over time. Our comments on interactions with ethnicity are based on the regression models shown in Table 1.5 with the addition of the 1996 vote.

find deepened support for both Netanyahu and Shas. Altogether our findings in this section suggest that in downplaying the class cleavage, students of Israeli politics have failed to recognize a significant correlate of electoral behavior. At the same time many of the most interesting results of the ecological analysis suggest interdependence between the impact of class and other social cleavages. Insofar as different *configurations* of class, ethnicity and observance are accompanied by distinctive patterns of electoral behavior, it is misleading to focus on the weight of one cleavage relative to another. It is more important to ask what glues these configurations together and endows them with electoral significance. We shall return to this point in our concluding remarks. The chief issue that must first be confronted is empirical rather than interpretive: does the empirical association between economic cleavages and voting patterns hold up when we move from ecological correlations to data on individual differences between voters?

# Part 2: Evidence from individual-level data

What can we learn from surveys of individual voters about the impact of ethnic, religious and class cleavages on voting? The most economical approach to the problem is the one adopted by Shamir and Arian (1999). They used multiple regression to estimate the "net" contribution of each variable of interest, with other known influences on voting also controlled. To evaluate this approach we took the principal model used by Shamir and Arian (1999:Panel 2 of Table 2, final column) to analyze the vote for Prime Minister in 1996 and applied it to their 1999 survey. In addition to ethnicity, religion and SES (measured by housing density, education and family expenditure) this model taps demography (age and gender) and issue positions (on territorial compromise, capitalism vs. socialism, and religion and state).[36] We echoed Shamir and Arian's preferred statistical technique (logistic regression) and all of their choices and definitions of variables, except in relation to ethnicity where two important modifications were made. First "Russians" (immigrants from the former Soviet Union since 1989) were excluded from the analysis so as not to confuse them with the veteran Ashkenazi group. Second, rather than merging "Sabras" (second-generation Israelis of unknown origin) with Ashkenazim, we created a second dummy variable for them.[37]

The most striking result of this replication (Table 2.1) is the strength of the ethnic effect, whether entered on its own or with the controls proposed by Arian and Shamir. The difference between Ashkenazim and the null category of Mizrachim is summarized by the relevant odds ratio, labeled "Exp(b)", which is

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[36] We refrained from including the evaluations of the candidates' competence that appeared in Shamir and Arian's complete model, on the grounds that these are so highly correlated with candidate choice that they should be regarded as a consequence no less than a cause of voting intention. This issue is taken up below.

[37] We also experimented with a 5-way split, distinguishing between foreign and Israeli-born Mizrachim and Ashkenazim. The results for the two generations were almost identical for both ethnic groups.

## Table 2.1: **Determinants of the vote for Barak vs. Netanyahu**
(Logistic regressions, 1999 pre-election survey)

| | **1** | | | **2** | | | **3** | | |
|---|---|---|---|---|---|---|---|---|---|
| | b | Exp(b) | *t* | b | Exp(b) | *t* | b | Exp(b) | *t* |
| Constant | 0.42 | | *3.8* | 4.75 | | *6.8* | 8.14 | | *7.2* |
| Ethnicity | | | | | | | | | |
|    Ashkenazi | -1.18 | 0.31 | *-7.0* | -1.08 | 0.34 | *-5.4* | -1.00 | 0.37 | *-3.7* |
|    Sabra | -0.58 | 0.56 | *-3.2* | -0.19 | 0.83 | *-0.9* | 0.01 | 1.01 | *0.0* |
| SES | | | | | | | | | |
| Density | | | | -0.39 | | *-2.3* | -0.25 | | *-1.0* |
|    Education | | | | -0.23 | | *-1.9* | -0.20 | | *-1.3* |
|    Low Income | | | | 0.06 | | *0.8* | 0.18 | | *1.7* |
| Religion | | | | | | | | | |
|    Secular | | | | -1.08 | | *-9.8* | -0.35 | | *-2.1* |
| Demography | | | | | | | | | |
|    Age | | | | | | | 0.00 | | *-0.4* |
|    Female | | | | | | | -0.26 | 0.77 | *-1.2* |
| Issues | | | | | | | | | |
|    Territories for peace | | | | | | | -0.78 | | *-11.6* |
|    Capitalism vs. socialism | | | | | | | -0.46 | | *-3.3* |
|    State & religion | | | | | | | -0.50 | | *-3.5* |
| N | | 831 | | | 757 | | | 713 | |
| Percent classified correctly | | 61% | | | 70% | | | 85% | |

This analysis excludes new immigrants from the former USSR.
Dependent variable in this and all subsequent analyses of the survey data is a question that forced respondents to choose between Netanyahu and Barak as their preferred Prime Minister if elections were held today.

approximately one third in all three equations. Turning this result around, Mizrachim were roughly three times more likely than Ashkenazim to choose Netanyahu over Barak, with or without taking into account their other personal characteristics.[38] Interestingly the Sabras, positioned in Model 1 midway between the other two groups, converge in Model 3 with the null category of

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[38] Note that the vote intention question used in these equations did not permit respondents to choose candidates other than Netanyahu and Barak. The ethnic bias of the Bibi/Barak vote is even larger if we exclude those who would have preferred Mordechai or another third party candidate. The reason for this is that most Mordechai supporters, including Mizrachim, fell back on Barak as their second choice.

Mizrachim rather than behaving similarly to Ashkenazim as previous researchers have assumed.

What about the effects of religiosity and class? Two of the three SES variables have marginally significant effects in Model 2, but all three "wash out" when more controls are added. Similarly the impact of religiosity, very strong in Model 2, almost loses significance in Model 3. Thus while adding control variables improved the overall fit of the regressions without affecting the impact of ethnicity, it partly or wholly eliminated the role of the other social cleavages.

We find these results unconvincing. The models assume that all of the independent variables have linear (or more accurately, loglinear) effects and that none of these effects is conditional on other variables. An alternative approach is the use of less precise but more subtle exploratory methods resting on descriptive rather than inferential analysis. This approach, which is also much better equipped to handle peculiarities of the data at hand, yields suggestive individual-level results that are broadly similar to the ecological findings in Part 1. Our analysis affirms the independent role of ethnicity in structuring the non-Arab vote. And, as we would expect from Model 2 above, it shows that if only social background variables are considered religion matters enormously. The surprise is the impact of class, seemingly the weakest of the background influences, which turns out to have both strong and consistent effects.

### *Reassessing the impact of class*

The poor empirical showing of the socioeconomic indicators in Table 2.1 is traceable in part to problems with the operationalization and measurement of class in the 1999 survey (and its many predecessors). The previous section developed the argument that class structure s most usefully conceptualized and measured multidimensionally. Of the three dimensions discussed there—consumption standards, type and conditions of work and sectoral differences—only the first is seriously addressed in the survey.[39] Moreover, the measurement

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[39] The survey's "employment status" question permits only crude distinctions between wage-earners and self-employed and, among the wage-earners, between three broad

of socioeconomic variation is complicated by specific problems with the indicators used. Inspection of their distributions revealed that housing density and education both "bunched" at certain values.[40] In addition the most direct indicator of living standards, household expenditure, has questionable validity and reliability since it appears that many people do not know, or do not honestly report, how much their family spends in a month. The specific content of the question also gave rise to a worrying distortion in the results.[41]

These drawbacks of the available indicators of voters' class situation make it very problematic to treat them as continuous variables, and they virtually guarantee weak linear correlations with voting. However, reconstructing the indicators in categorical form with breakpoints specifically tailored to their idiosyncrasies yields a quite different picture of their association with political choice. As Table 2.2 reveals, crowded households, less than college education and low family expenditure were all powerfully associated with strong support for Netanyahu, while the opposite conditions of economic advantage were linked to exceptional support for Barak.[42] For both density and expenditure the gap

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occupational groups. These divisions were uncorrelated with voter choice. Sectoral differences, both in the consumption and production domains, were not addressed at all.

[40] Housing density for nearly one third of respondents was precisely one person per room, and 60 percent reported 12 years of schooling.

[41] Respondents were asked to evaluate their household expenditure relative to the mean for a family of four (NIS 9,000 at the time of the survey) *taking into account the size of their own family*. Apparently those with small families failed to make this adjustment and therefore understated their true standard of living. Many of the 12% of respondents who chose the lowest expenditure category ("far below the average") had smaller families: mean family size was lower by about a quarter than the rest of the sample. Yet their housing density, an alternative indicator of living standards, was similar to those who reported "a little above average" spending. They also voted like the relatively affluent (only 40% supported Netanyahu). We therefore disqualified this category from the table that follows.

[42] A fourth indicator, tapping perceived economic insecurity, also revealed more support for Netanyahu among the economically vulnerable. Among those with paid employment

<div align="center">Table 2.2: **Class effects on the vote for Netanyahu**</div>
<div align="center">(1999 pre-election survey)</div>

| | | | |
|---|---|---|---|
| *Housing density* *(persons per room)* | Up to 1= **40%** | 1 to 1.33=**64%** | More than 1.33=**74%** |
| *Formal education* | College degree=**37%** | 12 years=**50%** | Less than 12=**47%** |
| *Your monthly spending compared with the average* | Above average=3**6%** | Average=**52%** | A little below average=**63%** |

between the polar categories in support for Netanyahu was very large, on the order of thirty percentage points.

In principle these gross effects of class might turn out to be ephemeral once we take account of ethnicity and religiosity, the other noteworthy social bases of voting in Israel. Unfortunately these also pose problems of measurement and analysis. For instance it is unreasonable to assume a linear relationship between religion and voting. While nearly all of the observant would presumably prefer a rightwing candidate, we can expect additional sources of differentiation to influence voting among the less committed groups. The results of the 1999 survey show that there was almost complete uniformity of preference in the Prime Ministerial race among those who defined themselves as either "religious" (*dati*) or "orthodox" (*haredi*). One hundred out of a total of nearly 900 respondents with all of the relevant information placed themselves in one of these two categories. Of these 100, fully 94 preferred Bibi to Barak. Nevertheless, a large majority of the Israeli Jews polled by Shamir and Arian defined themselves as either "traditional" (*masoreti*) or "secular" (*chiloni*). To what extent did ethnicity and class jointly and independently affect their votes?

Our first step was to create multiway tables (here presented as charts) summarizing the association between different combinations of the three social

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who were asked whether they feared losing their job or income, the proportion favoring the candidate of the right was 43% among those "not at all worried", 49% among those "a little worried", and 55% among the "very worried".

cleavages and the vote for Netanyahu versus Barak. The class cleavage presented particular problems. As already intimated, the available indicators offer a poor theoretical fit to the conceptual dimensions of class that interest us. The three indicators analyzed so far are closer to the notion of socioeconomic status (SES). It was not possible to combine all three indicators because, for reasons explained in note 41, we suspect a serious problem with one of the categories of the family expenditure variable. Accordingly, the measure actually used is based only on density and education.[43]

Chart 2.1 (appended to the paper) presents the results of this analysis. They may be summarized as follows.

1. Irrespective of their ethnic or class background, members of the *dati/haredi* group almost uniformly voted for Netanyahu.[44]

2. The ethnic hierarchy in voting is clearly affirmed (except for the heterogeneous "Sabra" category), with new immigrants from the former Soviet Union most strongly supporting Netanyahu and Ashkenazim most strongly favoring Barak. This broad hierarchy holds whatever further divisions are considered, but some interactive effects can be discerned. It is particularly notable that the "ethnic gap" between Ashkenazi and Mizrachi voters varies markedly between the different categories of religious observance. As with the *dati/haredi* group, the *masoreti* vote was not much affected by origin. Yet among the secular, support for Netanyahu was 45% among Mizrachim but only 14%

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[43] For the purposes of Chart 2.1, the tripartite divisions used in Table 2.2 were assigned numeric values of −1, 0 or 1 and the values of the two variables were then summed. This resulted in 5 categories, one of which was merged with its neighbor because it contained very few cases. Because of the problem of "bunched" values, one of the remaining 4 categories (the second-highest) unavoidably contained roughly half of all cases.

[44] Because of the very small number of cases in some of the cells, it was not practical to investigate the correlates of the small Barak vote by subdividing religious voters by both ethnicity and class.

among Ashkenazim. To put it another way, Barak's Ashkenazi advantage was substantial only among secular voters.

3. With the exception of very religious voters, the impact of SES is pervasive (a conclusion which closely parallels the ecological findings in Part 1). *Whether its effect is assessed in relation to religious practice, ethnicity or the two in combination, there is a clear and consistent decline in support for Netanyahu as SES increases.* These results do not mean that the impact of SES is entirely unconditional upon other factors, and indeed Chart 2.1 hints at several interesting interactions. Of most interest is the comparison with our earlier ecological findings. We saw in Part 1 that voting for Prime Minister was less sensitive to class and more to religion in Ashkenazi than Mizrachi areas. The survey data show the same pattern for religion but not for class. Still, given the weaknesses of the SES scale and the small sample sizes encountered as breakdowns become finer, it makes more sense to concentrate on the robust result that all three social cleavages independently affect voter choice. Class matters. But ethnic voting cannot be reduced to class (or religion).

The implication is that a satisfactory explanation of the social foundations of voting among non-Arab Israelis would have to incorporate all three cleavages.

### *The meaning of these findings*

What accounts for the striking difference between our findings and those of Shamir and Arian regarding the role of the class cleavage at the level of individual differences? We have already noted (and questioned) their assumption that SES variables would have linear and continuous effects on voting and their adoption of an additive model that did not allow for interactive effects. Still, although our alternative analysis yielded more coherent and powerful class effects, except for ethnicity and religion it did not control for other influences on voter choice. In this context it must be remembered that in the logistic regressions reported in Table 2.1 the impact of class evaporated after taking account of the powerful impact of issue positions on the vote. Might this be an indication that the (uncontrolled) effects in Chart 2.1 are spurious, that they are actually just proxying for issue effects?

**Correlations between voting and economic indicators**
(1999 pre-election survey)

| | Vote for Netanyahu | Netanyahu best at dealing with economic problems | Country's economic situation improved in last 3 years | Personal economic situation improved in last 3 years |
|---|---|---|---|---|
| Netanyahu best at dealing with economic problems | .95 | | | |
| Country's economic situation improved in last 3 years | .63 | .65 | | |
| Personal economic situation improved in last 3 years | .47 | .47 | .60 | |
| SES scale | -.23 | -.25 | -.21 | -.09 |

Pairwise correlations, sample sizes vary. Voting and "Netanyahu best" responses limited to those who chose either Bibi or Barak. The SES scale is described in the text.

Part of this seeming "false consciousness" could be illusory, the result of confounding the effects of religion and ethnicity with those of class. Indeed, both Mizrachim and *masoretim*—groups with a known preference for Netanyahu—are more likely to be lower class. But even when ethnicity and religion are controlled, it remains the case that lower-class voters had more confidence in Netanyahu and his economic management.[45]

In fact political scientists are well aware that economic interests are never mechanically converted into political preferences; instead they are filtered and even constructed by political entrepreneurs (e.g. Przeworski 1985). Indeed, the Israeli experience of a Labour Party which spoke the language of socialism and was (and is) disproportionately supported by the middle and upper classes has sometimes been cited as an extreme example of the autonomy of political "cues" (Arian and Shamir 1983). We agree that political attitudes can not always be taken at face value and may sometimes be best understood as symptoms of partisan identification. This seems to explain the almost perfect correlation in

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[45] The three bivariate correlations in the bottom row of Table 2.3 between SES and economic perceptions are all negative. Partial correlations controlling for religion (4-point scale of observance) and ethnicity (Ashkenazi/Mizrachi dummy) are slightly lower but still negative.

Table 2.3 between evaluations of Netanyahu's competence vis-a-vis the economy and the propensity to vote for him. It in all probability also explains the strong positive association between support for Netanyahu and perceived improvement in the economic situation in the course of his incumbency—especially since his rival, Barak, went to great lengths to define this as the central issue of the campaign.

Our point is that the causal role of political attitudes cannot be taken for granted because voter attitudes have complex and sometimes veiled links with voter interests, on the one hand, and party ideologies on the other. We shall reflect further on this issue in the conclusion. The task of interpretation will be postponed for now in favor of our primary agenda, which is to empirically identify the implications of class and other cleavages for the behavior of Israeli voters. Part 3 takes a methodological leap beyond the dichotomy between macro data on contexts (Part 1) and micro data on individuals (Part 2). The challenge now will be to distinguish between the contributions of the same variables operating at the micro and macro levels. In doing so we would like to directly address the question raised in Part 1, of how local context affects electoral behavior.

# Part 3: Putting voters in context

While voting is ultimately an individual act, there are good reasons to believe that local conditions structure individual behavior, both directly and indirectly. The range of choices relevant to the individual, and the implications of individual differences, may both be powerfully shaped by community context. To analyze such effects, as well as to overcome problems of inference from both micro and macro data, requires a methodology capable of recognizing and jointly evaluating both individual and contextual effects on voting. The ideal tool for this purpose is multilevel analysis (MLA), an innovative statistical technique which has become especially popular in research on individual differences in school achievement.[46] Students of educational attainment employ MLA to disentangle the effect of individual differences between students from the effects of teachers, schools and/or communities. The technique has obvious relevance to the study of voting behavior, in which individuals make decisions which are likely to be affected and conditioned by their spatial and social environment. Research in the UK and Australia has in fact demonstrated the existence of quite profound local and regional effects on individual votes (Jones, Johnston, and Pattie 1992; Charnock 1997).

The essential requirement for MLA is a dataset integrating individual and aggregate-level information. Most election surveys in Israel could be adapted to this purpose. Like other polls the 1999 pre-election survey conducted by Shamir and Arian was not designed for the purpose of multilevel analysis. However, because the sample was comprised of a diverse but limited selection of localities it was possible for us to identify in which of the 38 sampled areas each of the 1,075 non-Arab respondents resided. A number of limitations should be noted. First, the sample is very uneven in terms of the number of respondents per locality. Jerusalem and Tel Aviv were represented by 95 and 125 respondents respectively while many localities had only a handful of representatives. We

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[46] Very recently MLA has moved out of the ghetto of educational research and onto the cutting edge of research on social stratification. See the two lead articles in the October 1999 issue of the *American Sociological Review*.

excluded the smallest of these (under 20 respondents) and also removed kibbutzim and moshavim. In addition, two localities with radically unrepresentative samples were dropped[47], the relatively small number of "Russians" were excluded, and Jaffa was merged with Tel Aviv.

After listwise deletion of missing values, this yielded an effective sample of 591 individuals living in 16 localities. Except for the two big cities the sampling proportion was inevitably small. Six localities ended up with sample sizes of 15-20, two (Herzliyya and Ramat Gan) had roughly 60 respondents, and the remainder (other than Jerusalem and Tel Aviv) were in between. Yet if we aggregate intended votes by locality, the predictions offered by the survey turn out to be surprisingly close to the real thing. While many factors could be expected to differentiate poll data from true outcome data (including problems of representativeness, validity and timing of surveys), the correlation across the 16 localities between survey and actual data for the Netanyahu-Barak split was .77 (.87 if one problematic locality was excluded[48]). In terms of geographical representation the final selection of locations is biased towards the central area of the country but it also includes Afula, Haifa and the Qrayot in the north, and Ashdod, Beersheva and Ofaqim in the south.

Despite the limitations of the dataset, it opens an intriguing window onto the significance of local context for political behavior in Israel. A good preliminary illustration of this is provided by the ethnic vote. Chart 3.1 presents the proportion of Ashkenazim and Mizrachim who supported Netanyahu in 11 of our localities, arranged in ascending order of the Ashkenazi vote for Bibi.[49] The bars

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[47] Relatively few ultra-orthodox Jews were sampled in Bnei Beraq and not enough veteran residents in Lod, where nearly all the respondents were new immigrants.

[48] Ramat Hasharon yielded much higher support for Netanyahu in the survey than in actual voting, apparently because of under-sampling of Ashkenazim.

[49] The chart excludes 5 localities, those with the smallest sample sizes and the deviant case of Ramat Hasharon.

Chart 3.1
**The ethnic vote for Netanyahu by locality**
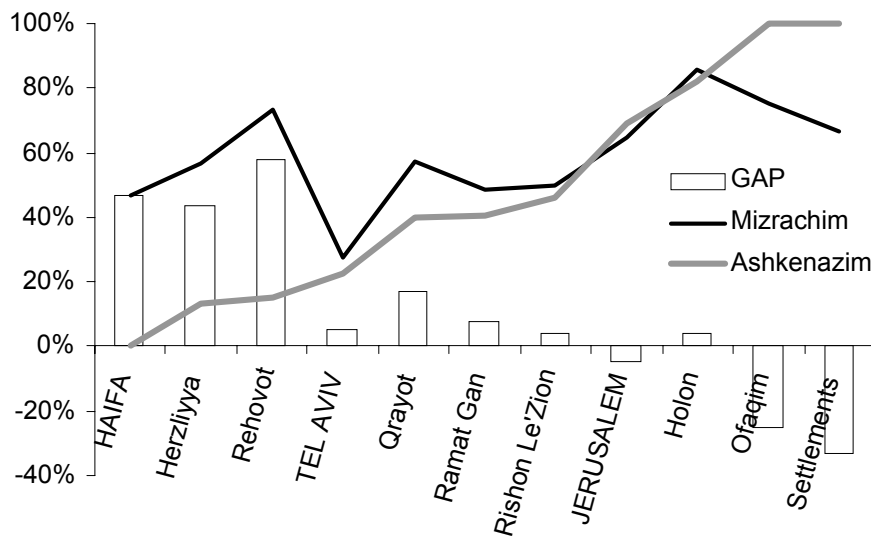


show the size of the gap between the two groups in support for Bibi in each locality. Several striking features stand out:

1. The size and even the direction of the gap between Mizrachi and Ashkenazi votes differs enormously across localities. This finding throws into question the very notion of *the* ethnic vote. It also raises serious doubts about the validity of using ecological correlations to make ecological inferences regarding individual behavior.

2. Ashkenazi support for Bibi is much less bound by ethnicity than is the Mizrachi vote. In all but one locality (Tel Aviv) at least half of the Mizrachim preferred Bibi. In contrast the Netanyahu vote among the Ashkenazim in the survey ran the entire gamut, from zero in Haifa to 100% in the settlements.

3. The data invite some intriguing comparisons between the political profiles of different communities. "Blue-white" Jerusalem and "red" Tel Aviv are complete opposites in terms of support for Netanyahu; but neither city exhibited an ethnic vote in 1999. In Jerusalem most survey respondents preferred Bibi and in Tel Aviv most preferred Barak *regardless of whether they were Ashkenazim or Mizrachim*.

Obviously much more and better data would be required to validate and elaborate such local contrasts. But by combining micro-level data on individuals

from the 16 available localities with macro-level census data for these same localities, we can construct a dataset which is at least minimally adequate for the purposes of multilevel analysis. It should be remembered that our aim in using MLA is not to characterize local voting behavior and its causal origins in specific communities. We are interested in finding relationships between variables and levels that hold across a diverse selection of communities. Such relationships, if they exist, will enable us to make quite strong inferences about whether location matters and why. These are the three specific questions that we would like to address:

1. To what extent are local differences in the vote, including the ethnic vote, merely the byproduct of the type of people who live in different communities? The predominance of observant and traditional Jews in Jerusalem versus "secular" Jews in Tel Aviv is a good illustration of why the apparent impact of place could be spurious, resulting merely from a *compositional effect*.

2. If voting does differ across localities irrespective of the types of people who live in them, what features of localities can explain these differences? Judging by the results of our ecological analysis we would expect all three social cleavages to have strong *contextual effects*.

3. Localities may systematically bias the preferences of their residents towards one political bloc or another, but the size of this *local bias* may vary between different types of voters. That is to say, community context may alter the impact of individual characteristics. This is exactly what the raw data just presented appear to show vis-a-vis ethnicity: its relationship to voter choice varies strikingly from one community to another. Would this still be the case if we could set aside the impact of both individual and community-level determinants of voting?

MLA is designed to address precisely these three tasks: differentiating true contextual effects from compositional effects; explaining local bias insofar as it does exist; and identifying interactions between local and individual effects. Because the mathematics of multilevel estimation are quite complex, textbook presentations of the method can be formidable (for an exception see Kreft and Leeuw 1999). From a conceptual viewpoint, however, MLA has just a few essential features that are not difficult to grasp.

*First* it is necessary to understand the nature of a multilevel dataset. In our case what is being explained (the dependent variable) is differences in the preferences of individual voters. But not all the independent variables are located at the individual level. Micro-data on voters ("Level 1") is combined with macro-data on the places where they live ("Level 2").

*Second*, significant effects may be found at either or both levels. It is even possible that the same independent variable will do double duty at Levels 1 and 2. For instance the socioeconomic features of both individuals and the communities they live in may affect their votes. Moreover because MLA works with data at both levels, it can avoid the problems inherent in analyzing them one at a time. It seeks to purge Level 1 effects of distortions resulting from the fact that individuals actually live in proximity to others, very often people like themselves, so what appears to be atomistic behavior may in fact result from social conformity. At the same time, MLA aims to free Level 2 effects from the suspicion that they are compositional, resulting only from the sorts of individuals who happen to be aggregated in different communities.

*Third*, Level 2 is special because its features may be more than just determinants of voting. Level 2 factors may also condition the impact of other determinants. This type of conditioning is often called *interaction.* In our ecological research, we found that class differences in the vote for Shas were confined to Mizrachi-dominated areas, i.e. ethnicity conditioned class effects. Suppose that the ethnic composition of localities also conditioned the impact of an *individual's* class on her voting behavior. This kind of conditionality is known, appropriately enough, as *cross-level interaction*. Where, as in the example just given, higher-level variables condition the impact of lower-level variables, these are known as *random* (as opposed to *fixed)* effects. Most people find this terminology unintuitive and we prefer the term *contextual effects.* To isolate contextual effects (conditioning), MLA in essence carries out a separate regression for each locality. With these results in hand it permits the researcher to evaluate whether there is significant variation among local slopes and/or intercepts, and if so why.

### Multilevel analysis results

Before looking at the results of applying MLA to the merged survey and census dataset described above, a word of caution is called for. Given the drawbacks of the survey's sampling design from a multilevel perspective, the analysis which follows must be seen as more indicative than definitive. Its main purpose is to demonstrate the potential benefits in the case at hand of using MLA to integrate contextual and individual-level data—and the risks of not doing so. Our substantive conclusions should be treated as plausible hypotheses for further research, that hopefully will rest on datasets crafted from the outset with MLA in mind.

In the spirit of an exploratory analysis that stretches the available data, in the models that follow we have deliberately opted for simplicity in choosing both indicators and specifications. As explained below, a limited number of dichotomous explanatory variables are entered into the equations. For estimation, despite the advantages of logistic regression in analyzing dichotomous dependent variables, standard (OLS) regression is preferred. OLS is not only easier to interpret, but in the context of MLA it offers more tools for evaluating model performance and fewer estimation challenges. Nevertheless, to verify that the OLS results are not distorted all of the models were re-estimated using logistic regression and one of these results is presented here.

The multilevel analysis reported in Table 3.1 begins with the "empty" Model 1—so called because it is devoid at this stage of explanatory variables (Snijders and Bosker 1999:45-47). The purpose of this model is to decompose the overall variance in voting between each level: variation *within* localities (which can be thought of as representing individual differences) versus variation *between* localities (reflecting local bias). As is common in datasets where individuals are nested inside groups, only a modest share of the overall variance (12.5%) can be attributed to between-group differences. This ratio implies an *intraclass correlation coefficient* of .125, meaning that the clustering of voters in localities leads to some degree of similarity in their votes. Ignoring this clustering effect might cause an ordinary regression analysis to overstate the significance of pure

Table 3.1: **Multilevel analysis of the vote for Netanyahu versus Barak**

| | Permit intercepts to vary by locality | | Add predictors of individual differences | | Add predictors of locality differences | | Permit slopes of individual predictors to vary by locality | | Combine Models 3 & 4 | | Re-estimate Model 5 using logistic regression* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **1** | | **2** | | **3** | | **4** | | **5** | | **6** | |
| | b | t | b | t | b | t | b | t | b | t | b | t |
| **Fixed effects** | | | | | | | | | | | | |
| Intercept | .546 | 11.2 | .549 | 11.3 | .633 | 16.1 | .633 | 18.2 | .633 | 18.2 | 0.25 | 1.8 |
| Level 1 (591 individuals) | | | | | | | | | | | | |
| Mizrachi | | | .098 | 2.6 | .098 | 2.6 | .112 | 2.2 | .112 | 2.2 | .69 (2.0) | 2.6 |
| Sabra | | | .105 | 2.4 | .105 | 2.4 | .088 | 2.0 | .088 | 2.0 | .58 (1.8) | 2.6 |
| Crowded | | | .057 | 1.3 | .057 | 1.3 | .060 | 1.4 | .060 | 1.4 | .39 (1.5) | 2.1 |
| Observant | | | .229 | 5.6 | .229 | 5.6 | .216 | 5.3 | .216 | 5.3 | 1.25 (3.5) | 6.2 |
| Not dove | | | .515 | 14.1 | .515 | 14.1 | .516 | 14.4 | .516 | 14.4 | 2.73 (15.3) | 12.9 |
| Level 2 (16 localities) | | | | | | | | | | | | |
| Housing density | | | | | 1.53 | 4.2 | | | 1.47 | 4.7 | 8.20 | 4.0 |
| **Contextual (random) effects** | | | | | | | | | | | | |
| Intercept (reliability) | .795 | | .863 | | .715 | | .868 | | .728 | | .649 | |
| Slope of Mizrachi (reliability) | | | | | | | .383 | | .374 | | .385 | |
| Slope of Mizrachi (variance) | | | | | | | .013 (p=.06) | | .012 (p=.06) | | .576 (p=.05) | |
| **Model performance** | | | | | | | | | | | | |
| Unexplained variance | | | | | | | | | | | | |
| Within localities (Level 1) | .219 | | .143 | | .143 | | .140 | | .140 | | | |
| Between localities (Level 2) | .030 | | .033 | | .012 | | .033 | | .013 | | .359 | |
| Deviance | 812.4 | | 592.2 | | 582.0 | | 588.0 | | 579.6 | | | |
| Extra deviance/Extra parameters | | | -44.0 | | -10.2 | | -4.2 | | -2.4/-4.2 | | | |

\* Figures in parentheses next to dichotomous independent variables are odds ratios.

Estimation method is the population-average model with robust standard errors.

Models were estimated using HLM for Windows 4.04 after deviating Level 1 variables from their group means ("group centering"). Micro data were drawn from the Shamir-Arian 1999 pre-election survey; macro data were derived from the 1995 census.

All data for Jews only; micro data exclude recent immigrants from the former Soviet Union.

individual differences, although in the present instance this exaggeration turned out to be quite mild.[50]

The empty model estimates the overall intercept for all the individuals sampled, which is similar (but not identical) to their mean probability of voting for Netanyahu. The multilevel analysis also provides a separate intercept for each locality. Comparing these intercepts it is possible to infer whether the "base level" of the dependent variable differs across localities. The statistic which summarizes the extent of these Level 2 differences is the average "reliability" of the differences between localities. This statistic is very high in Model 1 (just under .8).

Model 2 introduces four explanatory variables which we already know are powerful predictors of individual voting behavior: the most potent issue variable in Table 2.1 (readiness to trade land for peace) as well as the usual three social cleavages. Ethnicity is represented in the equation by two dummy variables with Ashkenazim serving as the null category. We chose one indicator each for SES (housing density) and religious observance.[51] For ease of presentation all of the indicators are dichotomous and constructed so as to positively affect the vote for Netanyahu.[52] The initial results (Level 1 fixed effects) are as we would expect:

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[50] Estimating Model 2b using standard OLS regression yielded almost identical coefficients. The OLS t-statistics were higher, but only by about 10% except for the housing dichotomy ("Crowded") whose t value fell from an almost significant 1.9 in the standard regression to only 1.3 using MLA.

[51] All of the Level 1 indicators are based on the same questions utilized in Part 2 (the replication of Shamir and Arian's logistic models), except for religious observance. An alternative question requiring respondents to rank themselves on a 4-point scale rather than choosing between qualitatively different categories was preferred because it yielded a larger number of relatively observant respondents.

[52] Dichotomous variables are readily interpretable, even when analyzed in a logistic regression (Model 6). The precise cutoff points, details of which are available on request, were chosen so that the correlation between each dichotomous variable and the vote would be as close as possible to the result obtained using the original measure.

all variables except housing density are statistically significant (t ratios of at least 2.0), with religiosity and especially hawkishness having a pronounced impact on individual candidate choice.

The main purpose of Model 2 is to ascertain how much of the diversity of voting across localities disappears once we take account of key individual differences inside localities. This speaks to the crucial compositional question, whether the behavior of communities is simply the aggregate of the behaviors of their individual members. If so, differences in support for Netanyahu across localities will disappear once we take account of their composition. To put it another way, if all voters were alike in ethnicity, observance and so forth, would we still find variations in the aggregate vote of communities? The answer to this question is resoundingly positive. The reliability of local variation in intercepts is no lower (it is even slightly higher) than in Model 1. Naturally the extent of unexplained Level 1 variance is considerably lower in Model 2 than Model 1[53], but no reduction has occurred in the amount of unexplained Level 2 variance. This is extremely important. It means that there are no grounds to suspect that local differences in aggregate voting patterns merely reflect compositional effects.

The extent of each model's overall fit is addressed in the bottom rows of Table 3.1. Multilevel models are estimated by likelihood methods that generate a "deviance" statistic. One of the reasons for estimating the empty model is to obtain a baseline measure of deviance against which subsequent models can be assessed. An accepted indication that one model is a significant improvement over another, is that it reduces deviance by at least twice the number of additional parameters that it estimates (Kreft and Leeuw 1999:65). Not surprisingly, the addition of explanatory variables in Model 2 considerably

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[53] The table shows that the "within localities" measure of unexplained variance falls from .219 to .143 as we move from Model 1 to Model 2. The proportional reduction in variance is (.219 - .143) / .219 which is .35. This proportion is the equivalent of r-squared in conventional regression (Kreft and Leeuw 1999:115-116). In the present case it is indeed fairly similar to the r-squared of .42 actually obtained when using standard OLS to estimate the model.

improves the overall fit compared with Model 1. At −44 the ratio of "extra deviance" to "extra parameters" is obviously far higher than the minimum of -2.

Detecting variation in voting across localities that cannot be attributed to individual differences is only the first step in multilevel modeling. The next task is to uncover the sources of this variation by modeling the effects of differing local contexts. Using the rich dataset on localities collected for our ecological analysis we assessed the effect of Level 2 variations in the ethnic, religious and class composition of the 16 localities included in the survey and analyzed here. Of these variables *only class composition (average housing density) was found to have a significant effect*, as judged by both its high t-statistic and the sizeable reduction in unexplained Level 2 variance in Model 3 compared to Model2.[54]

The size of the Level 2 coefficient for density can be interpreted as follows. The measure actually used is each locality's deviation from the national norm of 1 person per room. A unit increase on this measure is equivalent to the gap between Haifa and the Qrayot, or Herzliyya and Holon -- and it was associated with 15 points more support for Bibi. This is a very large effect indeed, although we are aware that it might have been inflated by "centering" the independent variables around their local means.[55]

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[54] The introduction of the Level 2 density variable caused unexplained Level 2 variance to fall from .033 to .012, implying a very high Level 2 "R-squared" of .62.

[55] We adopted the convention of centering Level 1 variables, which in this case means that individual scores for housing density were calculated as deviations from locality means. Kreft and de Leeuw (1999:106-114) offer a very informative discussion of the implications of what they describe as "centering within contexts" (CWC) and the different ways of carrying it out. They point out that by reducing multicollinearity, centering usually has the desirable effect of stabilizing statistical models. However, its impact also goes far beyond that. From a theoretical viewpoint CWC models are only appropriate for researchers like us who believe theoretically in the existence of differential individual and contextual effects. Practically speaking, whether the variables are centered or not only has effects (though potentially very large ones) on the coefficients of Level 2 variables. In our case Models 3 and 5, those which included the effect of housing density at the

Note that between Models 2 and 3 the reliability of intercepts across contexts, an indicator of remaining contextual effects, declines; yet at .715 it is still very high. Unexplained Level 2 variance also declines between Models 2 and 3, although it remains highly significant.[56] To further account for variation between localities we might need to take account of other Level 2 variables that are not in our dataset. It is also possible that different *configurations* of characteristics render localities qualitatively different one from the other. But one thing is clear: beyond the effects of individual differences, *place itself*, and at least one characteristic (the standard of housing) of places, matter a great deal for voting in Israel.

So far we have looked only at differences across contexts (localities) in "base" levels of support for Netanyahu versus Barak (intercepts). We are also interested in knowing whether the impact of personal characteristics on individual votes is conditional upon features of the context in which the individual lives. To test for the existence of these cross-level interactions, we must permit not only the intercepts but also the *slopes* estimated in Model 2 to vary across localities. This is the purpose of Model 4, which includes the only Level 1 variable (ethnicity)

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community level, yielded much more modest effects when Level 1 variables were analyzed in raw form than when they were group-centered. One way of preventing exaggerated conclusions regarding Level 2 effects in the presence of Level 1 centering is to "add the subtracted mean back into the model, as an important between-group effect" (Kreft and Leeuw 1999:108). Accordingly, we re-estimated the effect of differences in density across localities by also including at Level 2 the means of the remaining Level 1 variables across localities (i.e. proportion of Mizrachim and Sabras, proportion observant, and percent who are "not doves"). This technique yielded results gratifyingly close to the models reported in Table 3.1. Comparing the original and "corrected" results we find that, in Model 3 for instance, the impact of Level 2 density is basically unchanged—the slope declined a little (from 1.53 to 1.36) while the t statistic actually rose slightly (from 4.2 to 4.7).

[56] Note that all of the unexplained variance calculations for Level 2 are highly significant. In both the OLS and logistic equations the HLM software yields significance levels of p=.001 or better.

whose effect was found to differ significantly across localities (Level 2). Reliability and variance, the two indicators of the extent of contextual differences in the ethnic vote, suggest that contextual variation is significant although modestly so. It seems that our earlier speculation that there may be no such thing as *the* ethnic vote may be well founded, although as with our other MLA findings, more and better data will be needed to be sure. Data limitations may also account for the fact that nothing came of experiments (not shown in Table 3.1) that proceeded to the ultimate stage of multilevel analysis, in which contextual variables are called upon to explain the varying impact of individual differences in different localities.

Our final two models, 5 and 6, integrate all three Level 2 effects: differences in intercept ("base levels"), differences in slope (with respect to ethnicity), and the fixed effect of housing density at the community level. Combining the latter two effects, Model 5 lowers the overall deviance by a satisfactory margin with respect to both Models 3 and 4 (both of the figures in the last line exceed 2). Gratifyingly, when the same equation is re-estimated using logistic regression (Model 6), none of the effects is found to lose significance. In fact the t statistics for individual-level coefficients are nearly all higher than those obtained using OLS. As a result the impact of housing density is statistically significant at the individual and locality levels alike. Voters are apparently influenced by both their own socioeconomic situation and, even more, the class composition of the communities they live in. We could hardly have hoped for more convincing evidence of the credibility of the class voting hypothesis.

## Conclusion

We began this paper by demonstrating the potential power of ecological analysis, largely untapped in previous work, to complement and in some respects even supersede the survey approach to electoral behavior. By correlating aggregate election results with background characteristics across numerous geographical areas, we were able to verify the centrality of class voting in Israel. Ecological analysis thus elevated the class cleavage—a social basis of voter choice suggested by both theory and common knowledge—to its rightful place alongside other well-known social divisions in the Jewish electorate.

Nevertheless, mindful of the so-called ecological fallacy in what followed we sought to forestall the suspicion that our results might be a byproduct of aggregation rather than a valid indication of the behavior of individuals. Given the weight of accumulated survey research in Israel this was a tall order, but we believe that Part 2 makes a strong case that the absence of class effects on individual voting in previous empirical research has probably resulted more from methodological inadequacies than from the actual patterning of voter behavior. Still, as we have taken pains to stress, micro and macro-level data are not simply alternative sources of empirical information for modeling the behavior of individual voters. In Part 3 we moved beyond the individual/aggregate dichotomy by using multilevel analysis to distinguish between the impact of individual differences and local biases.

The common thread that ties together the findings from each one of the three methodologies is the significance—hitherto largely unappreciated—of class voting. But beyond this important generality, the three methods did not always yield convergent results and indeed, given the differences and tradeoffs between them convergence could hardly have been expected. The interactive effects of ethnicity, religion and class differed significantly when we moved from ecological to survey analysis. Which results are more credible? The ecological analysis was undoubtedly the most "solid" in terms of the size and quality of the database but, as we conceded, errors can occur in inferring both individual and contextual effects from aggregate data.

When the survey data were integrated with information about the places where the respondents lived, we discovered vast differences in the impact of one type of individual difference (ethnicity) across communities. Given a pooled dataset of this kind, MLA represents a vastly superior methodological strategy than either ecological analysis or conventional survey research alone. We cannot pretend to have met its demanding requirements here, although it is encouraging that at the individual level, the results are similar to those obtained in Part 1. But when we turned to contextual effects, while the ecological analysis furnished strong indications that the ethnic composition of localities conditions the impact of both class and religiosity on voting, we were unable to verify these effects using MLA.

These and other inconsistencies emphasize the tentative nature of some of our findings but are not discouraging. As we have stressed throughout this paper, inadequate quantity or quality of datasets and questionable operationalizations of key variables pose difficulties for all three types of empirical analysis. Yet the results have, we believe, accomplished our main purpose of questioning the paradigm and the techniques underlying the long-established view that class is located at the bottom of a well-defined hierarchy of social cleavages among Israeli voters.

Our obligation to the reader does not end here, however. In the introduction we pointed out that the Israeli polity is characterized by weak political articulation of class by parties and discourses. Our empirical demonstrations that the political choices of individual voters and voting communities are nevertheless decidedly influenced by class cleavages is therefore puzzling: what drives class voting in Israel if it is not class politics? Brooks and Manza (1997), who justly insisted on the distinction between class voting and class politics in their study of political change in the United States, contend that the massive swing of professional workers towards the Democratic party during the postwar period can not be explained by changes in either the class interests or the class consciousness of members of this stratum. Instead, their findings portray it as a result of the rising political salience of professionals' increasingly progressive positions on social issues (racial and gender equality).

For Brooks and Manza the increasing importance of "post-materialist" issues does not contradict the persistence of class voting in the U.S.—but it also does not explain it. At least in the case of the professionals we disagree. Instead we speculate that their class formation as voters rests upon partially different foundations than the factors that were responsible in the past for the political mobilization of the working class. Rather than union membership and class solidarity, professionals share a social outlook that helps sustain their distinctive collective identity and at the same time provides them with "cultural capital" that indirectly serves their material interests (cf. Bourdieu 1984). In this instance, then, even though the issues concerned are non-economic in content issue positions reinforce rather than compete with class allegiance.

The traditional model of working class mobilization and the alternative model of shared convictions and identities are not the only sorts of glue that might cause voters to stick together as a class. An additional possibility, much discussed by earlier generations of political sociologists, is overlap between class positions and membership in an ascriptive (e.g. ethnic or religious) social group. Such overlapping may be fertile ground for a mutual sense of inferiority (or superiority) and a shared identity. In other words, class may structure voting because of the way that it is imbricated in other social cleavages. If so it would be decidedly mistaken to frame research into the social bases of voting as a quest to establish the relative importance of multiple cleavages.

We believe that these theoretical considerations can be helpfully applied to the Israeli puzzle of class voting without (traditional) class politics. On the one hand, the central hawk-dove division and controversies about the relationship between citizenship and religion indirectly tap class interests. On the other hand, political behavior is shaped by overlaps and interactions between ethnic and religious cleavages and class cleavages. Neither argument should be taken to its reductionist extreme. The ethnic vote is not simply disguised class voting. Nevertheless, lower class Mizrachim and higher class Ashkenazim do have distinctive and homogeneous political allegiances. These groupings are also characterized by their affinity to distinctive values and collective identities which derive from the interplay between culture and interests, not cultural differences per se.

The case of Shas exemplifies the combined effects of class, ethnic and cultural cleavages. Peled (1998) has argued that the rising tide of support for Shas among lower-class Mizrachim results from their historic marginalization along *both* economic and cultural lines (Shafir 1990), currently aggravated by the further threats to their economic and cultural position posed by globalization and liberalization. The integrative effects of Zionist ideology, the intermediate position of Mizrachim between Ashkenazi Jewry and the Arab enemy/other, and the historic failure of the Israeli left to authentically represent workers and the underprivileged, generated a political opportunity structure which closed off two

alternative reactions: ethnic "secession" or working class solidarity.[57] Instead the social services operated by Shas cater to the economic interests of disadvantaged Mizrachim while its *Haredi* approach to religion and primordial interpretation of Israeli identity challenge the cultural dominance of Ashkenazim.

Benjamin Netanyahu's version of the old-fashioned Likud blend of nationalism and populism—not to mention Shas's potent mix of primordialism and clientilism—served notice to lower class Jews that they would not be forcibly exposed to the market, where they suffer from obvious disadvantages. By the same token, their secular-liberal-dovish collective identity (Moore and Kimmerling 1995; Shamir and Arian 1999) is not the only tie that binds today's largely Ashkenazi managers, professionals and businessmen to "left" parties. The discourse of the Israeli left also embodies the distinct material and symbolic interest of this group in what Peled and Shafir (1996) describe as "peace and privatization" (see also Levy 1997:Chapter 6; Ram 1999). In short, the class position of Ashkenazim and Mizrachim and contemporary identity politics are interconnected foundations of class voting in Israel.

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[57] On the ethnic politics of the Israeli labor movement see also Swirski (1984) and Shalev (1992) .

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# Chart 1.1
## Class, ethnicity and voting in 1999

**Netanyahu**



**Likud**



**One Israel**
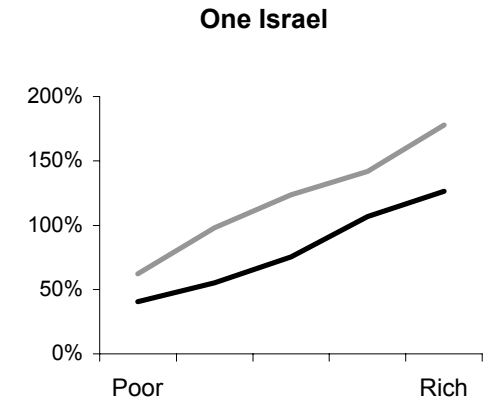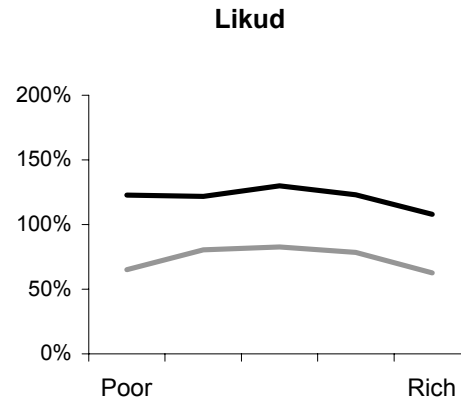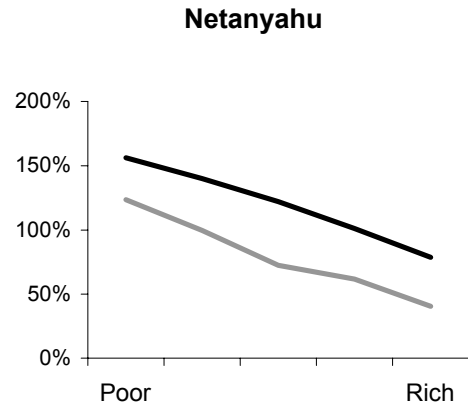


The value for the lowest income quintile (not displayed) is 222%
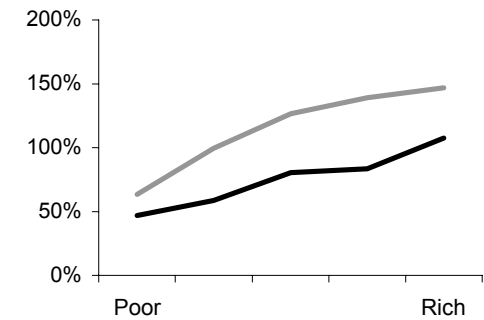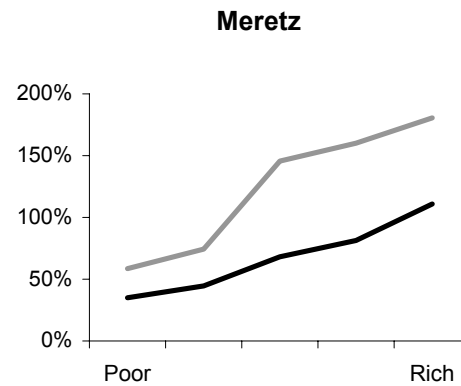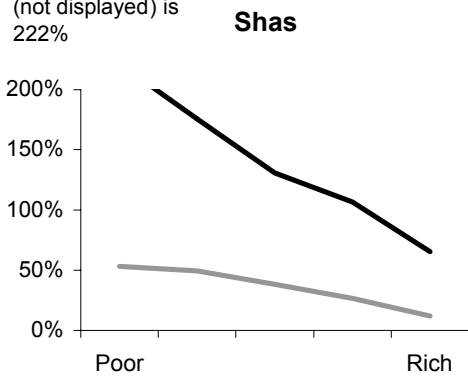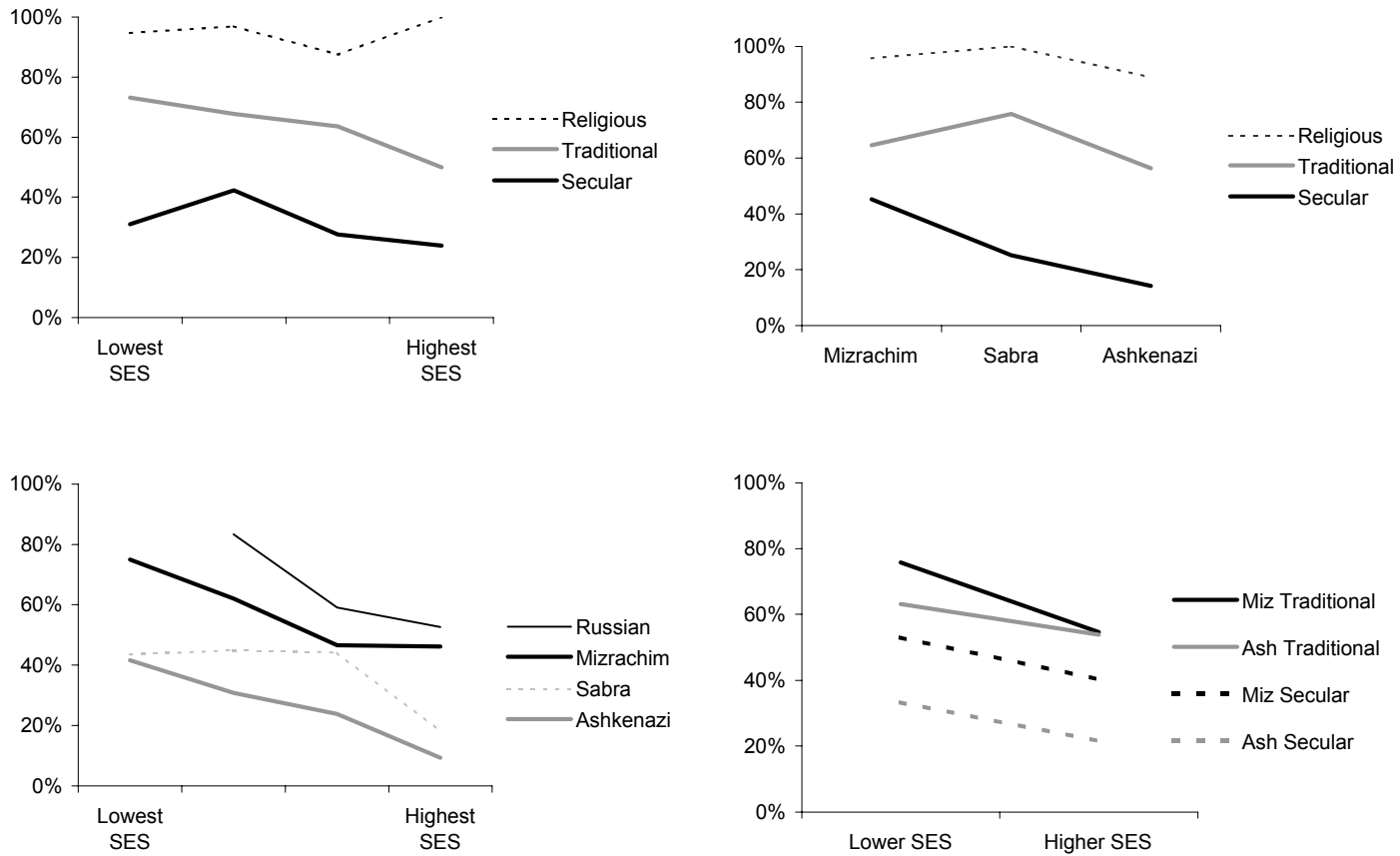
**Shas**



**Meretz**



**Shinui**

## Chart 2.1
## Conjoint effects of class, religion and ethnicity on Percent Netanyahu
(1999 pre-election survey)



In the graph in the top right quadrant, the Ashkenazi category excludes "Russians". Haredim are excluded from all the graphs, and the graph in the bottom left quadrant also excludes "religious" voters.