



Samuel Neaman Institute
FOR ADVANCED STUDIES IN SCIENCE AND TECHNOLOGY

SAMUEL NEAMAN INSTITUTE
THE FORUM OF NATIONAL SECURITY
THE SOCIETY & NATIONAL SECURITY PROGRAM (SNS)

THE CONCEPT OF SOCIAL RESILIENCE

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ABOUT THE INSTITUTE

The Samuel Neaman Institute for Advanced Studies in Science and Technology is an independent public-policy research institute, established in 1978 to assist in the search for solutions to national problems in science and technology, education, economy and industry, and social development. As an interdisciplinary think-tank, the Institute draws on the faculty and staff of the Technion, on scientists from other institutions in Israel, and on specialists abroad. The Institute serves as a bridge between academia and decision makers in government, public institutions and industry, through research, workshops and publications.

The main emphasis in the professional activity of the Samuel Neaman Institute is in the interface between science, technology, economy and society. Therefore the natural location for the Institute is at the Technion, which is the leading technological university in Israel, covering all the areas of science and engineering. This multi-disciplinary research activity is more important today than ever before, since science and technology are the driving forces for growth and economic prosperity, and they have a significant influence on the quality of life and a variety of social aspects.

The Institute pursues a policy of inquiry and analysis designed to identify significant public policy problems, to determine possible courses of action to deal with the problems, and to evaluate the consequences of the identified courses of action.

As an independent not-for-profit research organization, the Institute does not advocate any specific policy or embrace any particular social philosophy. As befits a democratic society, the choices among policy alternatives are the prerogative and responsibility of the elected representatives of the citizenry. The Samuel Neaman Institute endeavors to contribute to a climate of informed choice.

The Institute undertakes sponsored research, organizes workshops and implements continuing education activities on topics of significance for the development of the State of Israel, and maintains a publications program for the dissemination of research and workshop findings. Specific topics for research may be initiated by the Institute, researchers, government agencies, foundations, industry or other concerned institutions. Each research program undertaken by the Institute is designed to be a significant scholarly study worthy of publication and public attention.

Origins

The initiative for establishing this Institute in Israel was undertaken by Mr. Samuel Neaman. He nurtured the concept to fruition with an agreement signed in 1975 between himself, the Noon Foundation, the American Society for Technion, and Technion. It was ratified in 1978 by the Senate of the Technion. Mr. Neaman, a prominent U.S. businessman noted for his insightful managerial concepts and innovative thinking, as well as for his success in bringing struggling enterprises to positions of fiscal and marketing strength, devoted his time to the activities of the Institute, until he passed away in 2002.

Organization

The Director of the Samuel Neaman Institute, appointed jointly by the President of the Technion and by the Chairman of the Institute Board, is responsible for formulating and coordinating policies, recommending projects and appointing staff. The current Director is Professor Nadav Liron. The Institute Board of directors is chaired by Prof. Zehev Tadmor. The Board is responsible for general supervision of the Institute, including overall policy, approval of research programs and overseeing financial affairs. An Advisory Council made up of members of the Technion Senate and distinguished public representatives, reviews research proposals and consults on program development.



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Samuel Neaman Institute
The Forum of National Security
The Society & National Security Program (SNS)

The Concept of Social Resilience

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Preface

The most important resource Israel has is its human capital. From the economic point of view this has been capitalized on even before the establishment of the State of Israel and has seen fruit in the last fifteen years or so, as evident for instance in the ICT area in which Israel excels. In an effort to promote academic research to better analyze and utilize the human resource, The S. Neaman Institute established the STE (Science-Technology-Economy) program some years ago, to do research on Industrial R&D.

Two years ago, we decided to extend our efforts to the more important problem of National Social Resilience. This resulted in this trio attempt of diverse papers which are presented here.

I hope the papers will stimulate further research and learned discussion of this important concept.

Nadav Liron
Director
S. Neaman Institute

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The elusive concept of "social resilience"

Nehemia Friedland

The three articles presented in this booklet were written in response to a call-for-papers issued by the Samuel Neaman Institute's Defense-Economy-society-Forum. The latter was established to encourage and promote independent, academic research on topics related to national security. Thus far, the forum has focused primarily on the economics of national security and on national security and society.

The call for papers was addressed, mainly, to sociologists and to social psychologists. They were asked to take up the concept of "social resilience", to define it, to suggest theories or models of variables and processes that strengthen or weaken it, and to propose instruments and methods to measure it.

Two things became evident, immediately after the call-for-papers was issued and in the months that followed. For one thing, very few scholars rose to the challenge and showed any interest in exploring conceptual and methodological aspects of social resilience. Secondly, as is evident from the papers published in this booklet, perspectives on social resilience are highly diverse. Thus, although social resilience is "real" in the sense that "national security" cannot be contemplated without taking it into consideration, the concept remains highly elusive.

Social resilience is multifaceted and in order to conceptualize it, let alone measure it, one must bridge a number of divides. One such divide was presented most clearly by Amit and Fleischer. This is the divide between individual resilience, hardiness, and social resilience. While it must be obvious that the two are related in a complex interplay of bidirectional effects, it should also be obvious that social resilience is not just, or not simply, the sum total of its individual members' resilience. In general, the conceptualization and measurement of micro (individual) and of corresponding macro (group) variables, entities and processes (individual learning vs. organizational learning, individual performance vs. team performance, individual decision

making vs. collective decision making, etc) create a problem that social sciences have yet to resolve. The relationship between individual resilience and social resilience is just another example, and the conversion of individual measures of resilience to measures expressing the resilience of a society has yet to be determined.

A second divide concerns differences between subjective reports of feelings, emotions, anxieties and hopes that can be taken as measures of resilience, as suggested by Arian, and overt behaviors, discussed by Kirschenbaum. The relationship between emotions and attitudes, on the one hand, and corresponding behaviors, on the other hand, is not always clear and the combination of attitudinal and behavioral measures into coherent indices of resilience is anything but trivial.

The third divide that has to be bridged resides at the core of the "resilience" concept. "Resilience" has two connotations. It connotes, first, hardiness, toughness, resistance. Yet it also denotes elasticity, flexibility. Hence, social resilience should express, on the one hand, society's ability to withstand adversity with its values and institutions remaining intact. On the other hand, social resilience is also manifest in society's ability to cope with a changing, sometimes hostile, environment by changing and readjusting in new and innovative ways. The definition and measurement of social resilience must thus reconcile two aspects that are seemingly contradictory.

The ambiguity of "social resilience" notwithstanding, societies and their leaders cannot ignore it. "Social resilience" is a societal attribute related to society's ability to withstand adversity and to cope effectively with change.

Ambiguity notwithstanding, the rough contours of the concept of "social resilience" can be sketched. In the context of national security, social resilience is expressed in the commitment of various segments of society to join forces for the achievement of common goals, in their ability to cope with threats over extended periods of time, and in their ability to adapt to changes.

This rough definition of social resilience contains two key components. The motivational component refers to persons' willingness to mobilize for and to contribute to the common good, to forego or sacrifice, temporarily, individual aspirations, to help the collective achieve its goals. The second component refers to the ability to cope with actual or potential threats while maintaining a reasonable level of orderly functioning.

The challenge to social scientists is to refine the definition of "social resilience", to develop methods for its measurement, and to identify and investigate factors and processes that enhance social resilience or undermine it.

Social Resilience in Israel

Asher Arian

כי לא לעולם חסן משלי כז: 24

I. Introduction

How are we doing? How do we feel? What will be? These are the familiar questions of everyday conversation and they express the anxieties felt about our own futures, and the future security of the nation. Obviously, the answers to the trilogy of questions are interrelated. Assessing one's position, taking into account one's reaction to that position, and speculating about the effect of these on the future are all very human reactions to situations confronted in life.

How an individual thinks things are going, or how well a person thinks the country is doing, are assessments which go beyond the specific questions asked. The patterns of these answers for the entire society give us a glimpse of the values of the society, steadfastness in the face of adversity, reaction to causes of elation, and resilience to social challenge.

This report analyzes data for the years between 1962 and 2004 assessing the perceived wellbeing of one's personal and national condition today, five years ago and five years hence. These data provide a striking overall impression of an underlying mood of confidence among Israeli Jews especially true for the evaluation of personal fortune, while over the years, and despite gaps in the years covered by the data, optimism regarding the future of the nation slips.

This is a powerful unobtrusive measure of social resilience and it is especially cogent as it relates to both the individual and to the society of which s/he is a member. Slippage at both the individual and national levels would be more of an indication of lost resilience than erosion of one of these measures.

In the first decades of Israeli independence, the importance of the collectivity at the expense of the individual was stressed, justifying privation and sacrifice in the present for the future benefit of self and society. Later the priorities were reversed and this occasioned increased social strains that accompanied growing affluence and privatization. Esteem is now to be had for individual effort and wellbeing, based on the unwritten assumption that if the parts of the whole are content and prosperous, then it follows that the collectivity is also thriving.

II. Ladder Rankings

We can explore some of these notions more fully using the technique developed by Hadley Cantril (1965) to test levels of aspiration and frustration in societies. In Cantril's method, each respondent is interviewed at length regarding personal hopes and fears and is then shown a ten-rung ladder; the respondent is told that the top of the ladder represents the best possible life as just depicted, and that the bottom is the worst life envisaged. The respondent is then asked to indicate the appropriate rank for his or her position today, which rank it was five years ago, and which rank is foreseen five years hence. After a similar discussion of the nation, the ladder device is applied to the respondent's perception of the position of the country today, five years ago, and five years from the time of the interview. In each case, the reality world has been defined by the respondent, and the ladder ratings are relative to the subjective definition of the ladder provided by the respondent.

However, since the concept of a ladder, of up and down, or higher and lower, seems to be universal, Cantril applied this simple yet perceptive technique to comparative research across very different countries. Based on Cantril's data of 1962, it was possible to compare responses in Israel with those of other countries (Cantril 1965) and to analyze differences among groups in Israel (Antonovsky and Arian 1972). Over the years the technique has been applied in other research in Israel, almost always using the same format.ⁱ With the ladder method, the patterns of personal and national optimism and pessimism can be assessed over time, and the extent and importance of the changes that have occurred can be ascertained.

Reviewing the Cantril findings from the 1960s indicates possible patterns among the means of the six ladder ratings (see Table 1). The Americans interviewed generated the most consistently high means. Their differences between past and present were small, although the present seemed better than the past, and the future even brighter. The range of scores for the nation was much flatter than it was for their personal situations; personally, the past was worse than was the nation's, the present about the same, and the personal future was seen to be brighter than the national future. (These are projections made by Americans in the 1960s; today's responses for them and others might be very different.)

The Brazilian pattern was different. Brazilians started from the lowest personal point, and their national plight in the present was not perceived to be much better. The future, however, rose to the same level as the other countries, and even a little higher. The same pattern of progress from past to present to future was evident for Brazilians regarding the personal ladder. In fact, their increase was highest because their starting mean was so low.

Israelis ranked themselves between the Americans and the Brazilians in the 1960s, and somewhat closer to the Brazilians. Mean Egyptian scores on past and present were almost identical with Israeli scores in 1962. All four populations expressed a sense of personal progress in the five-year period, most notably the Egyptians. Israelis and Americans foresaw solid and intensified progress in the satisfaction of personal aspirations in the next five-year period, but neither was quite as optimistic as the Brazilians or Egyptians.

"Five years before" the interviewing in the early 1960s coincided with the Sinai campaign of 1956. Despite a striking military victory and a letup of terrorist activity, nothing much had changed for the Israelis. They had been forced to give up their territorial gains and they did not perceive that they had achieved political ones. They ranked the past a low 4.0. The Egyptians shared this view of the past; they had suffered military defeat, had become isolated from the West, and were yet to enjoy massive Soviet political, military, and economic support. Americans starting from a high base point, and Brazilians from a low one, reported almost no progress from national past to present; Israelis indicated considerable and Egyptians very great improvement.

Israelis, starting from a low base, were optimistic about past progress and even more so about anticipated progress. Americans were at the other extreme; they started out high and saw only slight positive change. Brazilians did not think much had changed in the past, but were extremely hopeful for the future.

Egyptians saw themselves worse off in the past, expressed a sense of great achievement, and saw future movement in the same direction, though not at quite the same pace.

An additional insight is obtained by considering data collected in June 1967, immediately after the Six Days war. In this survey, the past referred to Independence Day 1967 (May 15), when the prewar tension was beginning to build, and the future to one month ahead. The questions were asked twice

again in 1968, with identical results each time. Then the past referred to Independence Day 1967, and the future to one year ahead. For these three surveys, the Egyptian pattern was evident: the bulk of the anticipated improvement from past to future already had been achieved. The euphoria of the tremendous victory was evident in these postwar data; even the memory of the tense Independence Day took on a relatively rosy hue.

The important difference between the Israelis and others was that the personal past ranked higher than the national past; in the present, the two ratings were about the same; in the future the national rating was higher. Further, the overall progress of the country from past to future was greater than the personal progress. For the Americans the reverse was true; the country made less progress than the respondent did, and in the future, the sample members think they will be better off than the country. Brazilians also saw more overall personal progress, although the nation was consistently ranked higher. The Egyptians shared with the Israelis in the 1960s the feeling that the country would progress more than the respondents, although the personal future mean rank was higher than that of the country's.

We termed this 1962 Israeli pattern "compensation." We wrote:

How does one adapt to this sense of dissatisfaction? How does one make oneself feel better? . . . [A] partial answer . . . [is] compensation.

The pattern of compensation emerges in two ways. It can first be seen in a comparison of the present ladder ratings for oneself and for the nation. One way to reduce the sense of discomfort reflected in a low personal rating is to rate the nation high. It is as if one were saying, "I may not be in such good shape, but at least my country is in good shape, and this makes me feel better." Thus, for example, the lowest education subgroup, with the lowest mean present personal rating (4.4), has the highest mean present national rating (5.8). True, it is not always the case that this happens, but this is a rather stringent test. A fairer test of the compensation notion is to compare the present personal-national differences. In doing so we find great consistency: the gap is almost always greater for the marginal than for the more dominant groups in the society. The latter, in fact, often tend to rank the state of the nation lower than their own position. For example, the lowest occupation group (Group 5) has a mean personal ranking of 4.0 and a mean national ranking of 5.6, a difference of +1.6. For occupation group 4 the difference is +0.6; for group 3, +0.3. The sign becomes reversed for occupation group 2, the national rating being higher than the personal (a difference of -0.8); the difference in the highest occupation groups is -1.4. Or, to take the Israeli-born social class groups as another example: the lower class difference is +0.3; that of the middle class, -0.8; and that of the upper class, -1.4.

A second way in which the compensation pattern is expressed is with regard to the future. True, all groups without exception are optimistic, both for themselves and for the nation. The future ratings are always higher than the present ratings. But . . . marginal groups . . . show anticipation of considerable progress. (Antonovsky and Arian, 160-1.)

What we found for groups can be extended to nations. Focus on the future glory of the nation can compensate for feelings of deprivation in one's personal life. Alternatively, a narrower range of difference might result from a more sanguine acceptance of the positions of the nation and the self. Keeping this in mind, we turn to the available data on Israel, which cover the years 1962 to 2004.

III. 1962 to 2004

Figure 1 displays the mean ladder positions for the 1962 to 2004 samples. While the 1962 data generated improved rankings from past to present to future for both the personal and the national scores, the 2004 pattern is very different. In 2004, the present is the nadir for both the personal and the national categories, and the past and the present for both of them are not very different. If in 1962 one could see hope focused on national improvement, in 2004 the picture that emerged was much bleaker. Hope had been replaced by a resignation that while the present was not good, the future might well be as good as the past was. This is hardly optimism; it is more a suspension of pessimism.

Over the years, this set of questions was posed to 18,601 Israeli Jewish respondents.ⁱⁱ The samples were distributed very unevenly over time, with most of them in the 1986-2004 period; only a small fraction of the total was in the 1960s; the 1970s, a very tumultuous period in Israeli history, were not registered at all.ⁱⁱⁱ Accordingly, the accumulated means of the respondents must be considered with prudence since they average together many different surveys that have different results (See Figures 2, 3, and 4). Certain patterns are nonetheless worthy of note. Most of the mean scores were at or above the number 5 rung of the ladder, which is the median point.^{iv} The blatant exceptions were the national past mean of 1962, the national present scores of the 2000s.

Since the 1980s, the personal mean scores were higher than the national mean scores. The general pattern for the personal condition was that the present is better than the past and the future will be even better. The 1994 pattern was an exception to the general pattern in that both the personal present and national present means were lower than the personal past and national past means, respectively. The 1993 means were more typical: progress was seen in all the personal categories, from 6.0 in the past, to 6.2 in the present, and 6.8 in the future. On the other hand, the national present (5.6) was lower than the past (5.8); the future followed the pattern of improvement, increasing to 6.2. The tendency for the national means to be lower than the assessment for the present was repeated in the 2000s.

More than forty years of dramatic change in social, economic, military, and political conditions, and the attendant turnover of population and of survey respondents, would lead us to expect shifts in the ladder ratings. And change there was. For the national means, the record lows were recorded by the respondents questioned about the past in 1962 (4.0) and those questioned in 2002 about the present (2.7). The registered highs were 7.9 for the national future for those questioned in 1969 and for the personal future after the Gulf War in 1991 and before the al-Aksa intifada in 2000.

Comparing Figures 4 and 5 demonstrates how the graphs presented here were generated and how they are to be understood. In Figure 4, the means for the personal and national future responses are plotted by year of interview. The points are connected by the appropriate line denoting either the national or personal focus. Figure 5 is based on the same data, and the points are displayed as in Figure 4 along with the trend line that displays the best fit for the data points (Campbell 1990, 114) calculated by the least-squares method. In each year the mean assessment of the personal past was higher than for the nation, except in 1981 when they were tied (see Figure 2). This value generates a curved pattern, with the high point in 1991 and the low point in 2001. The trend lines demonstrate the propensity of Israelis to perceive the personal past slightly better over time and the national past as a bit worse. This is a harbinger of the erosion of retrospective optimism that seems to have characterized Israel over the decades.

This tendency of erosion is more pronounced in the assessment of the present. The trend line for the personal means is almost flat, but for the national present there is a substantial drop of two full points from 6.0 in 1962 to 4.0 in 2004 (see the second panel of Figure 6). The trend line for the personal future is also relatively flat, and the line for the national future tilts downward but at a more moderate slope than for the present. As the years went by, the samples seemed to see their personal present position static or improving. The national present trend generated a negative tilt, with the present slide more pronounced than the one for the future. As time went by, samples tended to give the position of the nation a lower score at the moment of the interview than did earlier respondents. The tendency for the personal ladder means tended up, while the pattern for the national ladder means seemed to be on the decline. Evaluations regarding the country and its security have gone down on the whole over time, while Israelis felt better about themselves and their personal chances. The differentiation between personal and national chances was evident regarding the situation four or five years from the period of posing the question. The overall pattern is an increasing spread between the personal and the national ladder ratings.^v Much occurred in the 1970s, most notably the enormous political and security changes occasioned by the Yom Kippur war of 1973. The public mood soured, the 1967 euphoria vanished, the economy was altered because of the need to invest in an army which could meet the postwar challenges, and the foreign policy of the country was in retreat. The data in these figures probably indicate that during those years a more realistic assessment of the past, and a dampened optimism regarding the present and future, set in. The net effect of all these changes was that the spread of the means over time for the personal and national expanded, although the personal future trend line was not statistically significant. The Yom Kippur war was likely a crucial turning point. Unfortunately, directly comparable data for the 1970s are not available. But there is strong evidence nonetheless. In a May 1973 survey (N = 1939), five months before the war, respondents were asked about the same topics in a direct manner. They were asked whether, in their opinion, the country's situation had improved compared to four years ago, stayed the same, or become worse. Then they were asked about their personal situations. According to their

answers, the country was doing much better before the Yom Kippur war than were the respondents. Almost two-thirds of the respondents said that the national situation had improved, compared with only 12 percent who opined that it had gotten worse, and another 23 percent who said that it had stayed the same. Regarding the personal situation, a third said it had improved, 21 percent responded it got worse, and 41 percent thought it had stayed the same. After the war, the shock tremors were clearly evident. In a November 1973 survey (N = 642), almost half the respondents thought that Israel's situation had changed for the worse as a result of the Yom Kippur war, 11 percent saw no change, and 19 percent thought it had improved (4% improved a great deal, and 15% improved).

The compensation pattern of the 1960s did not characterize the Israeli case in the 1980s, the 1990s and beyond. There was an important reversal between the rankings of the two periods. In the 1960s, the personal past ratings were always higher than the national rankings, but for the present and the future, the national rankings were higher than the personal ratings.

By the 1980s, the nation was no longer the object of hope and the focus of progress to the degree it had been in the 1960s. Rather, the future of the nation became more uncertain over time. In the 1960s, the future was seen as better than the present, which was perceived to be better than the past. Since 1986, the national past consistently has ranked higher than the present. That pattern held for the personal rankings as well for every year but 1987. Most important, optimism regarding the personal future seemed to have replaced hope for nation, reflecting the rise of individualism in Israeli society and the emergence of a me-now generation. This pattern, similar to those generated in other postindustrial societies, was buttressed by an expanding consumer economy and by social policies of the various ruling parties, each of which vied for the votes of the middle class. In addition, the public was affected by the challenge of the two intifadas, in 1987 and in 2000.

In summary, we have observed change in two senses, one time-specific and the other having to do with the subject of the query. First, for the past rankings, the personal stayed above the national, and the two increased together over time; for the present and the future in the 1960s, the national was above the personal, and in the 1980s and 1990s that pattern was reversed. Second, the

lines tended in opposite directions for the personal and national assessments of the present and future. The personal lines were tilting up, the national lines down. This was especially obvious for the future, but was evident for the present as well.

Two explanations, possibly intertwined, suggest themselves. An optimistic explanation would posit that as a collectivity Israelis evidently felt more secure and realistic about their security position after successfully coming through the anxieties of the Six Days war and the uncertainties of the Yom Kippur war and generated a pattern similar to that of the dominant groups just discussed. As with those groups, Israelis tended to rank the state of the nation lower than their own positions in the 1980s and 1990s. Precisely because the security challenge had been met they could afford to concentrate on their personal lives. This trend was encouraged by a succession of governments led by the major parties, which historically sought the vote of the large middle class by promoting consumption and a rising standard of living.

A less optimistic reading would point out that the public perceived the situation with less hope and promise over time, and with good reason. The curse that accompanied the blessing of the 1967 victory would not go away; the territories issue festered and infected every aspect of Israeli life. The army was perceived to be less able to meet the challenges the country faced. The intifada was an extreme manifestation of this, but not the only one. The eventual introduction of weapons of mass destruction into the Israeli-Arab conflict preyed on the minds of Israelis. Although the demise of the Soviet Union deprived the Arab enemy of its major source of military and political support, that collapse coincided with evolution of the United States -- Israel's chief ally -- into a superpower whose will and stamina were showing worrying signs of atrophy. Even after a peace accord with the dominant Palestinian groups was signed, terrorism continued to pose questions about the extent of security and the safety of life and limb. Accordingly, assessments of the national future became less rosy, and Israelis escaped this by concentrating on their personal lives. Of course, both of these explanations may be correct, at least in part.

IV. Analyzing Three Periods: Intifada, Oslo, Intifada

The ideas raised here can be further elaborated using the 1987-2004 era. This is a fascinating period of Israeli history and for this period there is also the most complete set of data. The era can be neatly divided into three periods: (1) 1987-1993, (2) 1994-2000; and (3) 2001-2004.

In Period 1 the first intifada began (1987); Rabin was elected prime minister (1992); and the Oslo accords were signed (1993). Period 2 witnessed the Rabin assassination in 1995 and the election of Netanyahu in 1996. In Period 3 the second intifada began (2000) and Sharon was elected prime minister (2001).vi The pattern for the entire 1987-2004 era is more similar to the one recorded in Figure 1 for 2004 than it is for 1962. The present means for both national and personal scores are lowest, followed by the past and then the future. The past scores are in the middle and the future scores are not much higher than the past means. The resilient pattern of 1962 is gone.

But perhaps the differences among the periods can recapture some of that buoyancy. After all, the period after the signing of the Oslo accords in 1993 was widely reported as opening a window of peace with the Palestinians and heralded a new era of conciliation. Was this reflected in Israel public opinion? It is reasonable to assume that traces of this changed attitude, if it existed, would be captured by the measure being employed here. If the expectation is that Period 2, the Oslo period, would be different from the two periods of strife represented by the intifadas, the data belie that prediction. Figure 8 indicates that it is period 3 that is different from the other two. It is not the case that the 1994-2000 saw an easing of attitudes because of the relative quiet in terms of the military situation. It was in fact the 2001-2004 period of the al-Aksa intifada and the increased suicide bombings that was associated with dramatic shifts in the patterns observed in other periods. Thus, for example, the personal present mean of 3.6 was lowest of any recorded in period 3 and the mean for the personal future in that period was a full point lower than it was in periods 1 and 2. The national present and future was also viewed much more grimly in period 3 than in the other two periods. If period 2 represented a more conciliatory era, it seemed that people's optimism or pessimism were little affected by the diplomatic shift. However, the worsening of the situation in terms of personal security as reflected by the situation of period 3 did have an

effect. People seemed affected by bad things they perceived, not by good things there were told about.

V. A Correlational Analysis

Correlating the scores among the responses provides added insights (see Table 2). One's assessment of the past is not a good predictor of one's attitude today or of one's assessment of the future. The strongest correlations (marked in red) were between the personal present and personal future scores on the hand and between the national present and the national future on the other. At a weaker level (marked in purple) is the correlation between personal past and present, national past and present, and personal and national future. Knowing one's assessment of his/her personal past is not an effective indicator of the way a person views the national present or future. Similarly information on how a person views the national past is not a good indicator of where s/he was in the present or where s/he thinks s/he will be in the future. One's assessment – and by extension, social resilience, is heavily present and future oriented. The past's failures or achievements do not seem to impact on the sense of where we are or where we are going.

Partial correlations (see Table 3) lead to the same conclusions. The largest correlations were between national present and future controlling for national past and between personal present and future controlling for personal past. The smallest correlations were between personal past and future controlling for personal present and national past and future controlling for national present. Another way of assessing these data is to determine the degree of relationship between the means and other background variables such as age, gender, ethnicity, religiosity etc. A long of series of such analyses was undertaken and the most important finding was the lack of significant patterns based on them. Similar patterns were evident in different periods for groups that are widely known to be different: hawks and doves, young and old, less educated and more educated, Sephardim and Ashkenazim, secular and religiously observant, and voters for parties of the right and for the left. The finding argues for the emergence in Israel of a community politics above class-based or partisan considerations. This factor is superimposed on the vocal polarization that is

sometimes used to represent politics in Israel. It may be that different processes are at work in different subcommunities to effectuate the universal shifts, but the end result shows a striking homogeneity of swing. Social resilience seems to be a generalized factor that sweeps through the entire society in very similar ways.

Evidence of this uniformity is the potency of one factor in relating to the patterns discussed here. That factor is the number of deaths among Jewish Israelis caused by terror. That factor was associated with changes in mean scores when plotted over the years (see Figures 9-11). There is a rough correspondence between the shifts in mean assessments and the number of deaths. This is seen especially strongly for the year 2002 and especially for Figure 10 and the report of the personal present and present national ladder means. The trauma of the present drives the responses more than the assessment of the past or the future. Just as important, the trauma of the present does not seem to effect the assessment of the future. This means that public opinion remains fluid and amenable to future appeals and reactions. Public opinion reflects ongoing events, but with an open mind.

VI. Two Special Samples

Data from two special samples were available drawn at widely different times and among very different populations. Considering their responses can highlight changes in the mean ladder ratings for the entire population.

The first was a 1962 sample of 300 kibbutz members; the second was a 1990 sample of Jewish residents of the territories taken in the 1967 war. These groups can be thought of as vanguards during the respective periods of data collection. The kibbutz movement represented the ideology of the socialist Zionist pioneers who founded the important institutions of the country and led it to independence; in the early 1960s their political, social, and economic power was still considerable, although soon to wane. The territories settlers were the end-of-the-century pioneering group dominant in the country. Largely religious rather than socialist, their nationalism was as fervent in the late part of the 20th century as was that of the kibbutz movement in the late 1930s. Like the kibbutz movement after statehood, their leaders were very well

connected with the country's political leadership, and benefited from government policies of land allocation and financial support. Often the pioneering leadership was critical of the politicians because they did not support the pioneers even more.

Ultimately, the movements became stigmatized as having too much power, and of being out of touch with the realities of the country. When the Labor and Likud parties fell from power in 1977 and 1992, respectively, the popular perception was that the successes of the movements and their perceived excesses were partially to blame. Whether or not that assessment was fair, it was clear that these two vanguard movements had impact well above their small numerical sizes. Both embodied ideals important to many in the population at the time of the surveys. Not everyone in the general population agreed with the opinions of the special groups, nor was the motivation of each member of the special groups (the kibbutz members and the territories settlers) entirely ideological. Yet, in a general sense, these groups represented a leadership cadre of the society, and as such, the comparison of their ladder ratings with those of the general population is of interest.

The kibbutz sample of 1962 rated the personal position for all three time periods very high in comparison to the general sample (Antonovsky and Arian 1972, 128-30). However, the kibbutz sample was lower in its evaluation of the national ladder positions than was the general population (see Figure 2.8). This was especially important because the kibbutz sample showed less change between the past and the future in the two topic areas than did the general sample. But unlike the general sample, the kibbutz sample perceived the personal future to be much rosier than the national future.

Different patterns were seen for the settlers. Compared to the breadth of spread between kibbutz members and the population in 1962, there were very similar patterns for the settlers and the general sample in 1990 (see Figure 13). With the exception of the past position for the settlers, means for the personal ladders were consistently higher than were means for the national ones. For both the general sample and the territories sample, the mean for the national present was lower than for the national future, and both of those were lower than the mean of the national past. No compensation here, and no great optimism either. Horizons had narrowed by 1990, and the focus of hope was on the personal, if

on anything.

VII. Conclusion

More than an increase or a decrease in social resilience over the 40 years studied (1962-2004) there seems to be a change in orientation.

The shift to the personal and away from the national is the major factor to consider when considering social resilience in Israel. However, there is no evidence that the national is not important. The shift in focus signifies a change in emphasis, perhaps a decrease in willingness to sacrifice for the state, but certainly it should not be misinterpreted as apathy or a decline in interest in the state or in national security.

More than that, a truncated time perspective seems to have emerged. It is not a view that assesses the present in relation to the past, but one that begins today, and perhaps extends till tomorrow. Even a five year future perspective seems too long for the current view in Israel.

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Notes

ⁱ See Kats 1982; Shmotkin 1990, 1991. There were slight variations in the application of the method over the years. (1) In 1969 and 1988, only the series of questions relating to the personal ladder was asked; national ratings were omitted. (2) Until 1981, the range of the ladder was from rung 0 to rung 10; after 1986, the range was from 1 through 9; rungs 0, 1, 9, and 10 were almost never mentioned and, accordingly, 0 and 1 were collapsed together as were 9 and 10 in these analyses. (3) In the 1981 survey, rung 1 was the top of the ladder, and 10 the base. (4) The 1969 and 1981 surveys used a four- rather than a five-year interval. (5) Since 1986, the wording of the national question specified national security; before that, the inquiry regarded the state of the nation.

² Surveys between 1986 and 2004 were part of the National Security and Public Opinion Project of the Jaffee Center for Strategic Studies directed by the author. See Arian 1995.

ⁱⁱⁱ See Stone (1982, chapter 4) for a measure of mood for this period in Israel.

^{iv} Until 1981, the range of the ladder was from rung 0 to rung 10; after 1986, the range was from 1 through 9. In both cases, rung 5 was the median.

^v In addition to the methodological issues discussed in the previous note, there may also have been an effect due to a slight variation in question wording. The wording was not precisely identical in each application. In the surveys before 1986, respondents were asked about the state of the nation in a general fashion; since 1986, the questions more specifically asked about the security situation of Israel. It could be argued that there was a narrower range of ladder means because people were more consistent regarding the more focused topic of security than about the country in a vaguer sense. But this explanation is unacceptable because the first evidence of narrowing is in 1981, a year in which the broader wording was still used. If the wording explanation is to be accepted, the shift should have occurred when the wording change was introduced.

^{vi} A total of 19,937 respondents were interviewed, 6,766 (33.9% of the total) in the 1987-1993 period, 8,487 (42.6%) in the 1994-2000 period, and 4,684 people (23.5%) in the 2001-2004 period.

Table 1. Mean Ladder Ratings in Four Countries, 1962

	Past	Present	Future
<i>National</i>			
United States	6.5	6.7	7.4
Brazil	4.9	5.1	7.6
Egypt	3.5	5.9	7.5
Israel	4.0	5.5	7.5
Israel 1967 ^a	5.0	7.5	8.0
Israel 1968 ^b	3.8	6.5	7.5
<i>Personal</i>			
United States	5.9	6.6	7.8
Brazil	4.1	4.6	7.3
Egypt	4.6	5.5	8.0
Israel	4.7	5.3	6.9

^a Asked immediately after the Six Days war in June of a national urban sample. "Past" refers to Independence Day in May 1967 when the prewar tension was building, "future" to one month ahead.

^b Asked in surveys conducted in spring 1968 and again in December 1968 of national urban samples. "Past" refers to Independence Day in May 1967 when the prewar tension was building, "future" to one year ahead. Source: Antonovsky and Arian, 1972, 20.

Figure 1. Ladder Values, 1962 and 2004

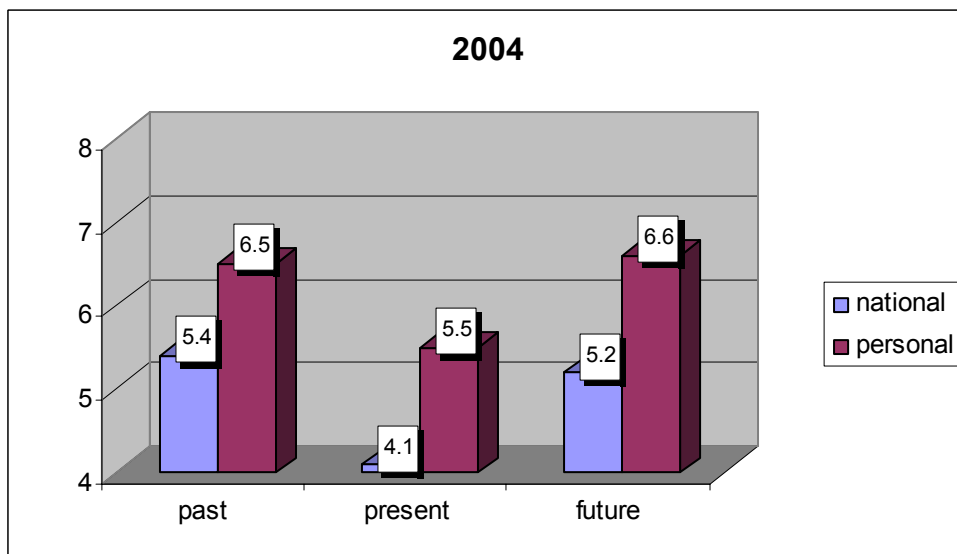
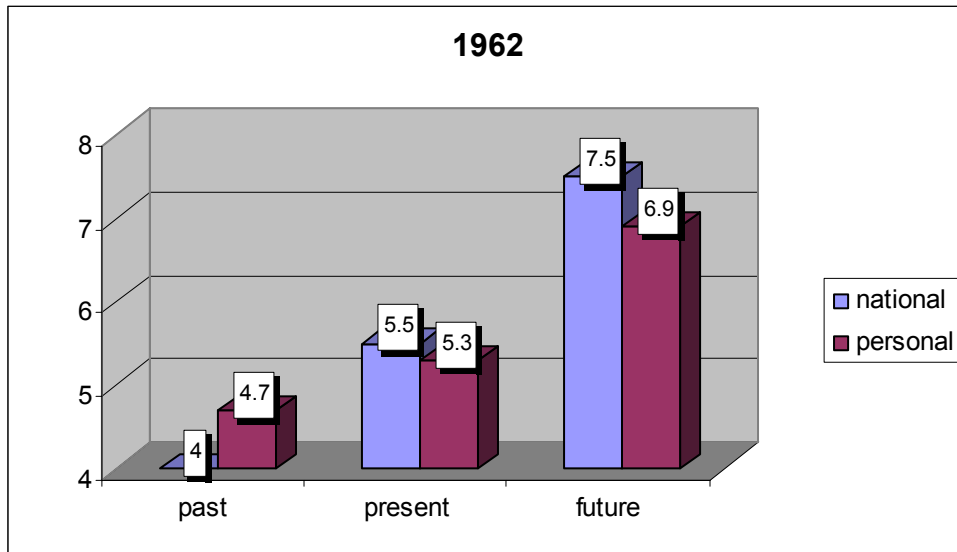


Figure 2. Past Personal and Past National Ladder Means, 1962-2004

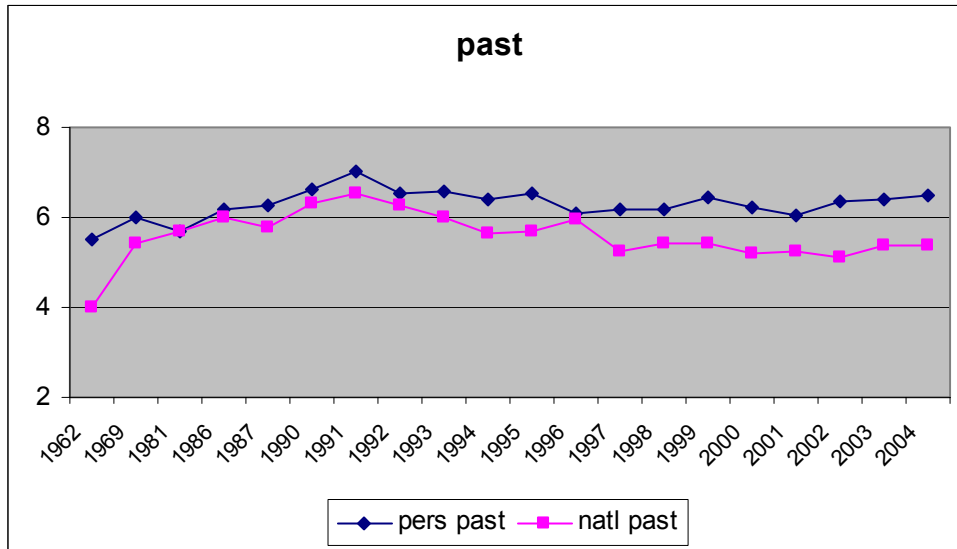


Figure 3. Present Personal and Present National Ladder Means, 1962-2004

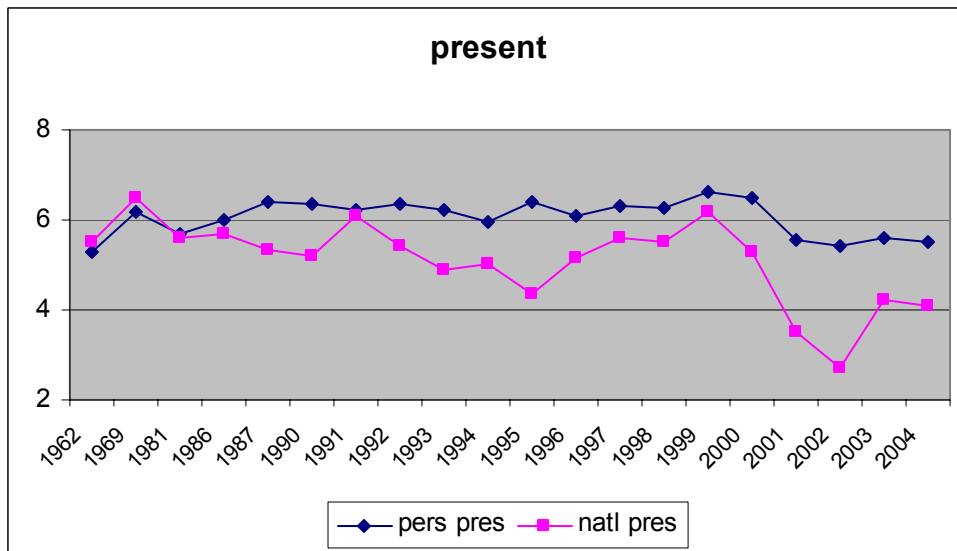


Figure 4. Future Personal and Future National Ladder Means, 1962-2004

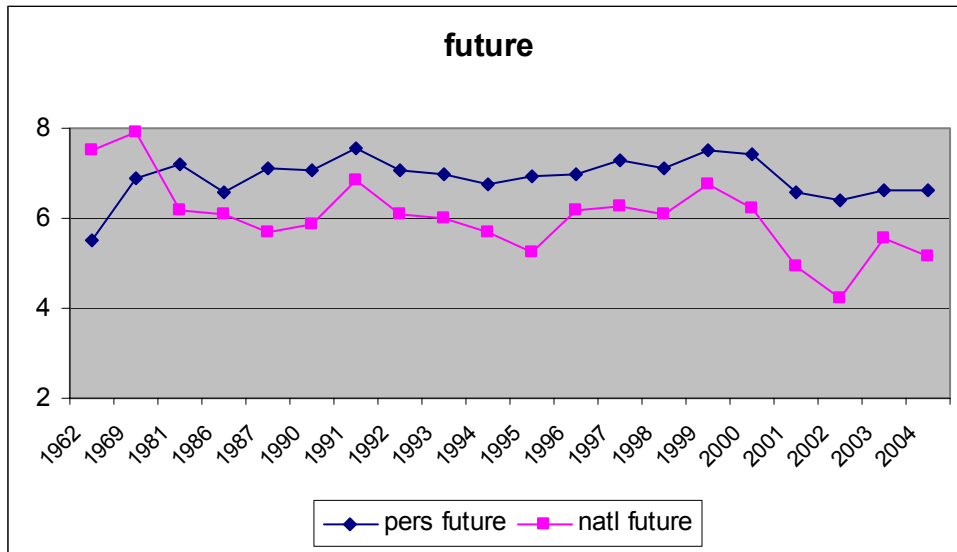


Figure 5. Future Personal and Future National Ladder Means, With Trend Lines, 1962-2004

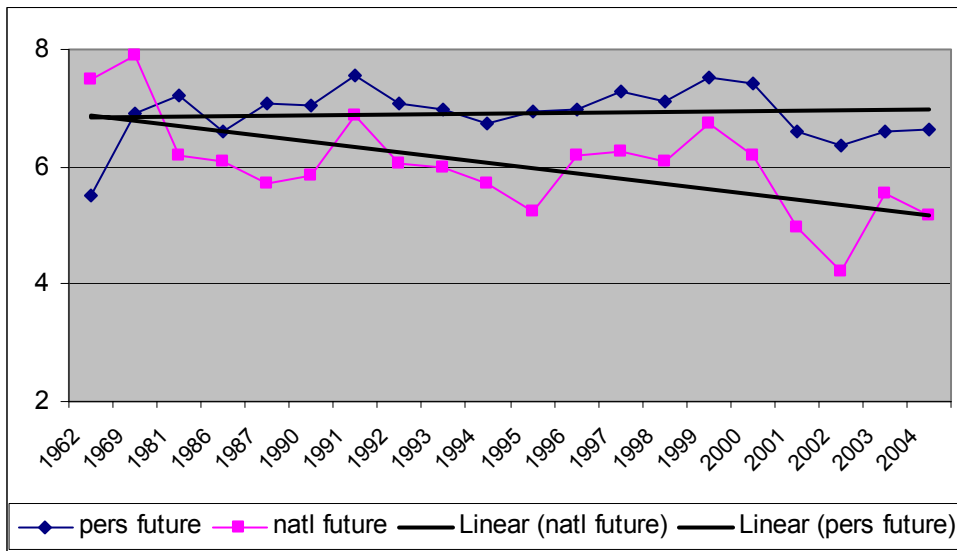


Figure 6. Past, Present and Future Personal and National Ladder Means, With Trend Lines, 1962-2004

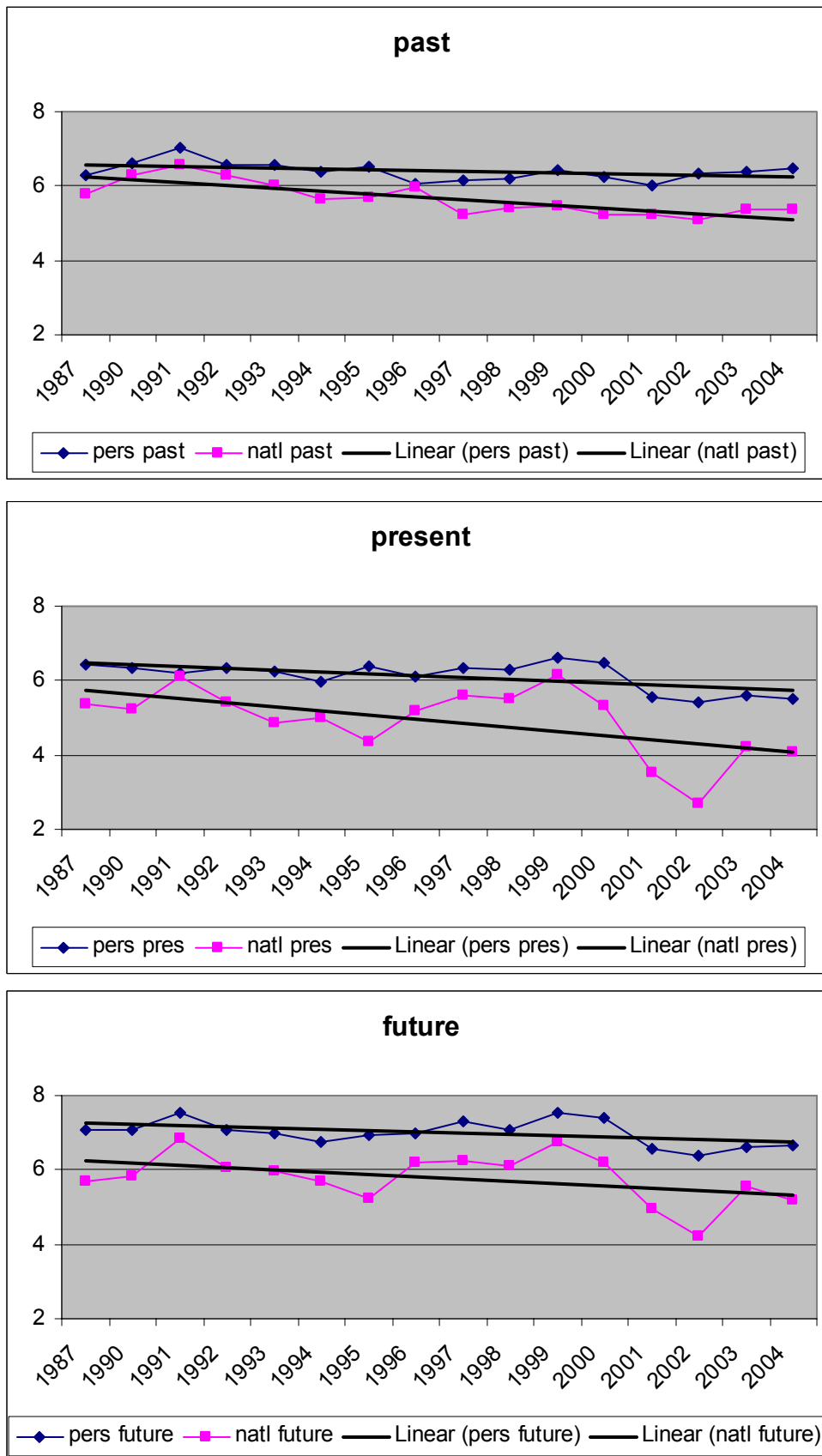


Figure 7. Past, Present and Future Personal and National Ladder Means, 1987-2004

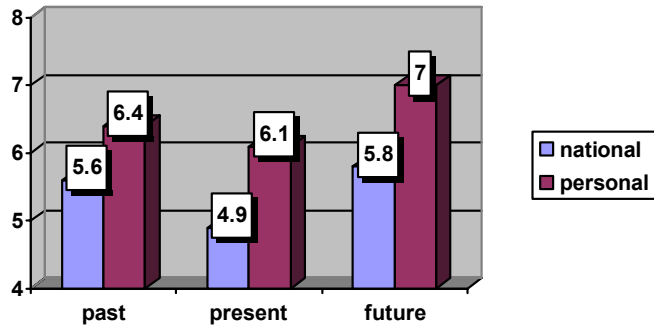


Figure 8. Past, Present and Future Personal and National Ladder Means, By Periods

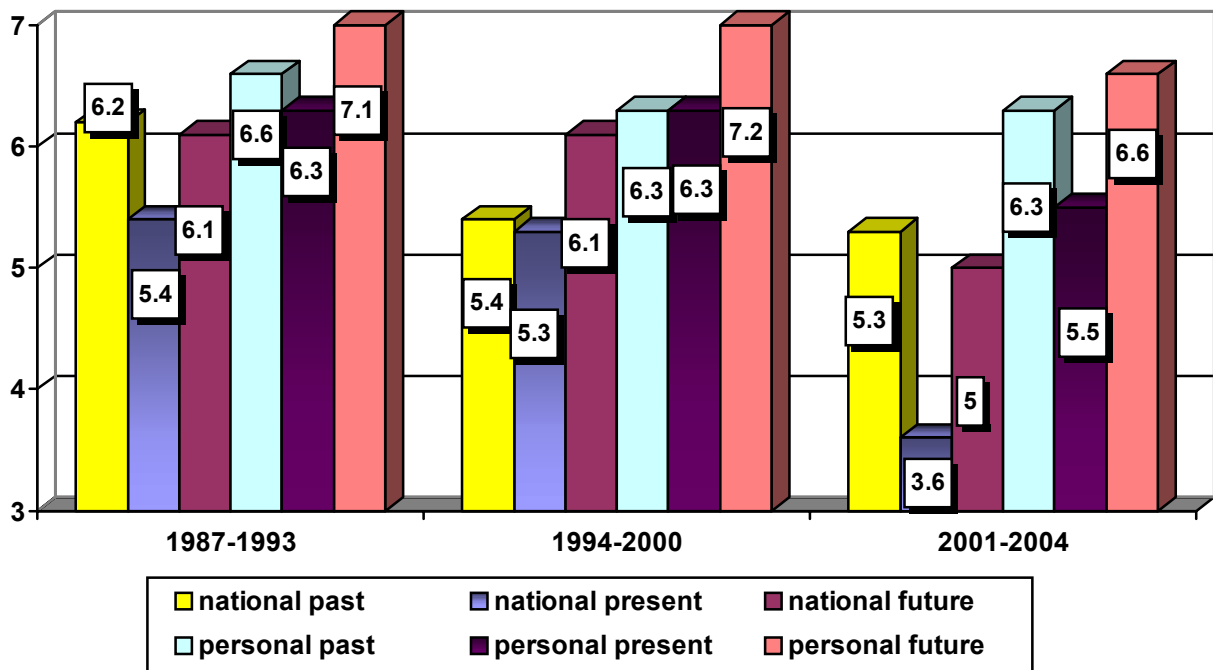


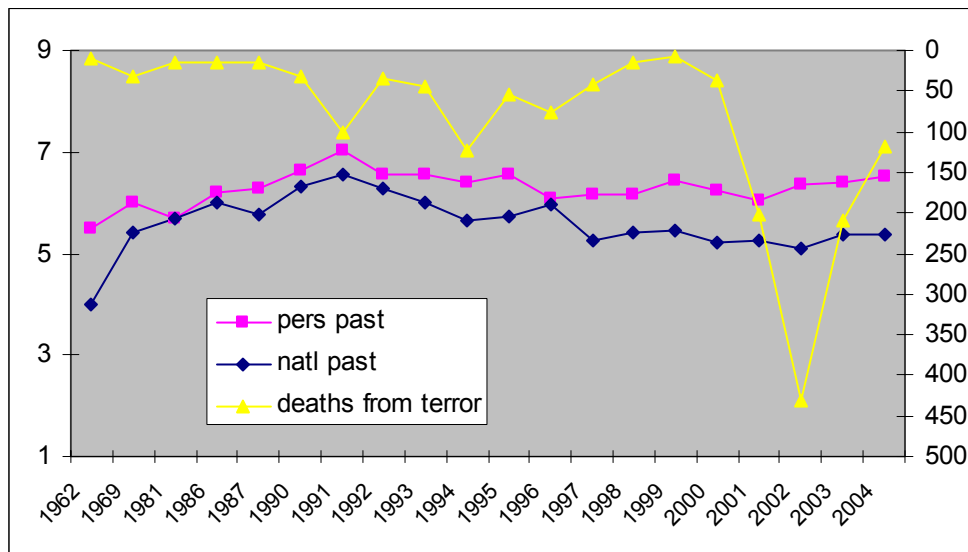
Table 2. Correlations between Past, Present and Future Personal and National Ladder Means, 1962-2004, N= 19,730a

	Personal past	Personal present	Personal future	National past	National present
Personal present	.389 N=18,601				
Personal future	.278 N=17,661	.579 N=17,704			
National past	.178 N=18,138	.074 N=18,206	.052 N=17,294		
National present	.065 N=18,468	.243 N=18,563	.218 N=17,583	.322 N=19,335	
National future	.075 N=16,761	.212 N=16,822	.310 N=16,761	.222 N=17,563	.602 N=17,747

Table 3. Partial Correlations between Past, Present and Future Personal and National Ladder Means, 1962-2004

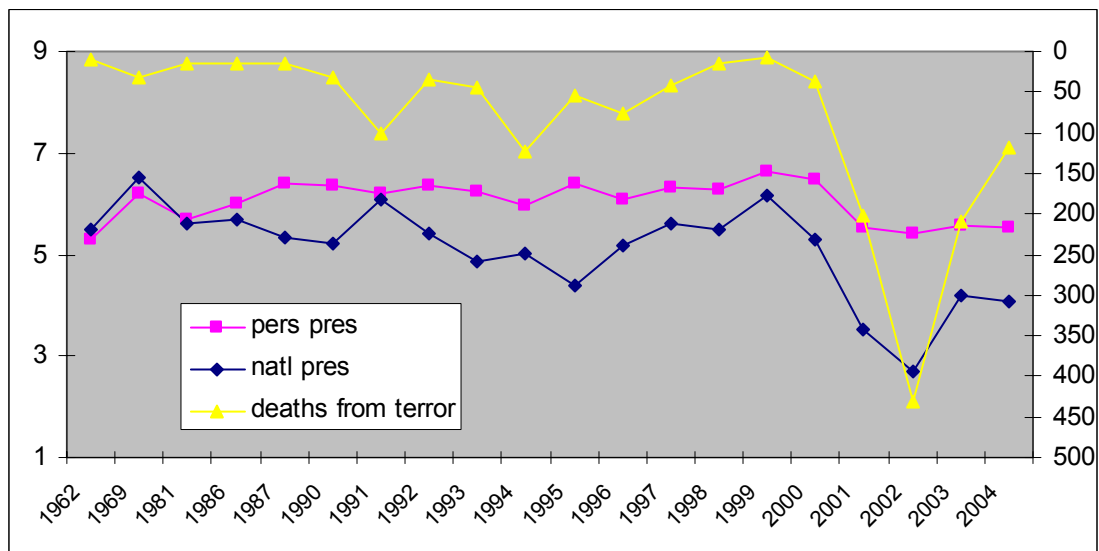
Variables	controlling for	N	correlation
national present x national future	national past	17,554	.575
personal present x personal future	personal past	17,652	.533
personal past x personal present	personal future	17,652	.297
national past x national present	national future	17,554	.242
personal past x personal future	present personal	17,652	.066
national past x national future	national present	17,554	.037

Figure 9. Personal Past and National Past Ladder Means and Israelis Killed in Acts of Terror, 1962-2004



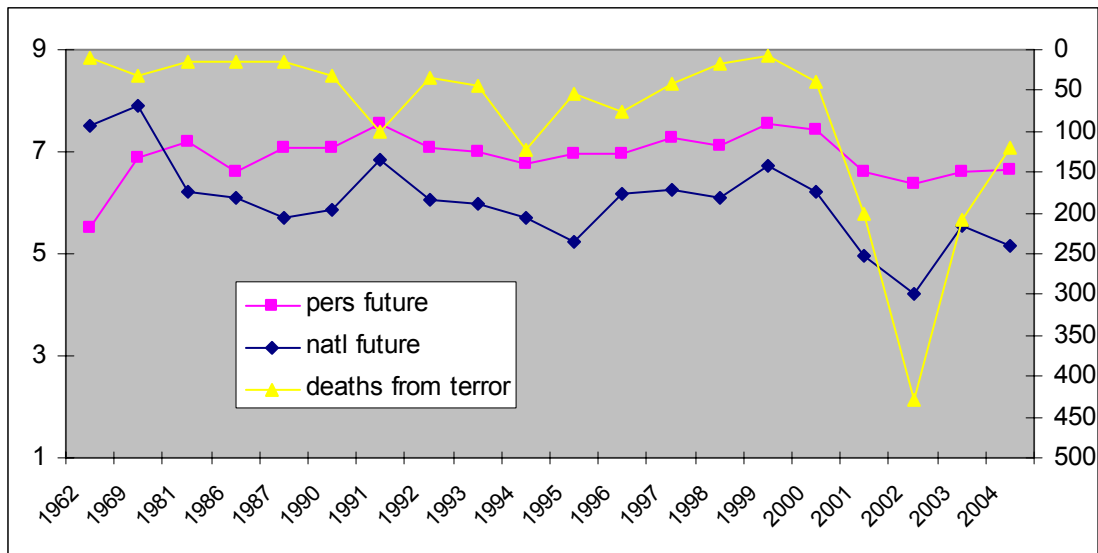
Source for Israeli deaths per year:
<http://www.johnstonsarchive.net/terrorism/terrIsraelsum.html>

Figure 10. Personal Present and Present National Ladder Means and Israelis Killed in Acts of Terror, 1962-2004



Source for Israeli deaths per year:
<http://www.johnstonsarchive.net/terrorism/terrIsraelsum.html>

Figure 11. Future Personal and Future National Ladder Means and Israelis Killed in Acts of Terror, 1962-2004



Source for Israeli deaths per year:

<http://www.johnstonsarchive.net/terrorism/terrIsraelsum.html>

Figure 12. Ladder Values, National and Kibbutz Samples, 1962

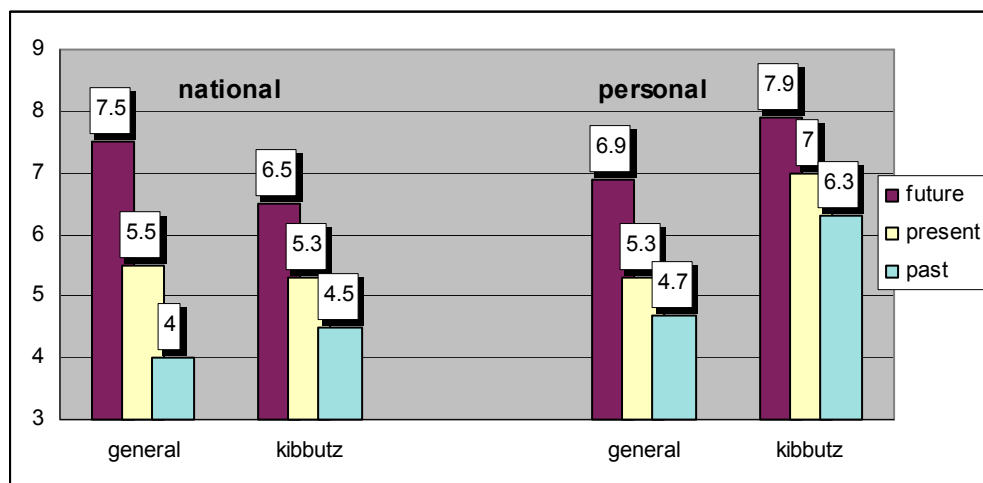
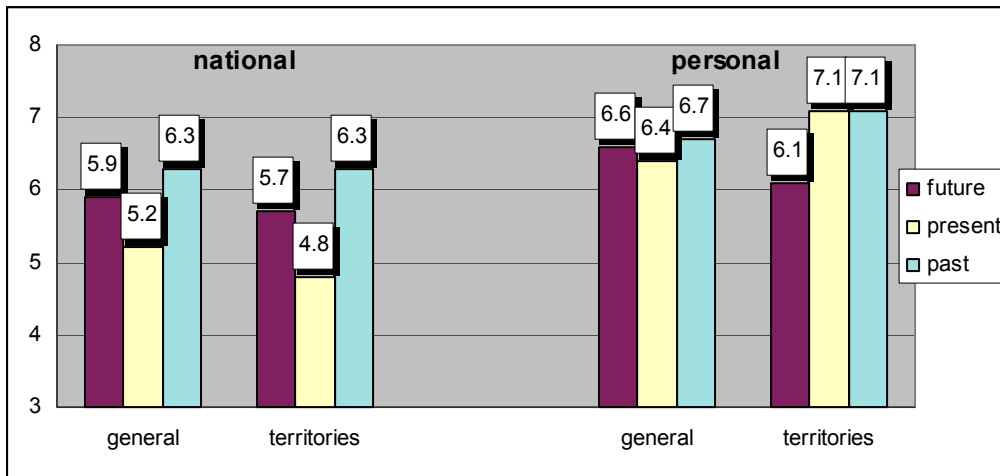


Figure 13. Ladder Values, National and Territories Samples, 1990



Adapting Behaviors of Israeli Civilians to Palestinian Terror©

Alan Kirschenbaum ©

I would like to thank **Inbar Malevski** for her invaluable help in this project.

Introduction

Terrorism is not a new phenomenon. It has been with us throughout history and across the globe (Roberts, 2002). In its most fundamental form, terrorism is a psychological tactic that uses violence and particularly the threat of violence to create an atmosphere of fear and anxiety in more people than are directly affected by the acts themselves (Pedahzur & Canneti-Nisim, 2004). Recent terrorist attacks in democratic societies such as in the United States and Europe have even transformed the issue of terrorism into a prime political concern worldwide. Recognizing the pervasive nature of terrorist activities globally has led policy makers as well as civilians to reevaluate terrorism as a major threat to their lifestyles and political well-being. It has even been considered a social problem (Clarke, 2004). One reason for this may be that 'terror' encompasses such a broad variety of forms of action that a diverse assortment of violent acts is now being considered terror (Roberts, 2002). Terror acts have come to include such diverse acts as suicide bombers as well as wife beaters. The US Code of Federal Regulations, however, defines terrorism as "...the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" (Terrorism files 28 CFR. Section 0.85, 2004a). Modern terrorism is in a sense a throwback to more historical forms of terror practiced by the ancient Greeks and Romans who targeted individuals and became increasingly involved in attacking innocent civilians (Roberts, 2002). Terror still remains mainly a local phenomenon but the use of modern communication media powered by the information revolution has extensively magnified terrorism's public impact (Terrorism files, 2004b).

Have these acts of terror and the widespread dissemination of its images also affected our behavior? Do we behave differently to terror threats than to other disasters? Have we incorporated special terror survival behaviors into our repertoire of historic institutionally embedded survival mechanisms? In short, have we adapted to terror as we have other types of disasters? To begin to attain answers to these broad questions, I propose to explore if, when and how we adapt to terror by providing critical information on (1) how and the degree to which terror has affected our behaviors; (2) discover which background characteristics are associated with various forms of adaptive terror preparedness behaviors and (3) seek out the antecedent conditions that have led to behavioral changes in response to terror threats. To do so, I will examine how Israeli civilians have reacted and adapted to consistent terror acts that have been imposed upon them by Palestinian Arabs. As Israel, a democratic western oriented nation, has and continues to experience terrorist attacks ranging from individual homicide bombers to organized terror groups, it represents a living laboratory to explore if behavioral changes have taken place as the result of terror activities. For this reason, its population was chosen as a prime example to evaluate the impact of terror on adaptation behaviors.

Adaptation Behaviors

The concept of adaptation is most strongly associated with field of biology and population. We can thank Darwin, Huxley and Malthusian ideas for their combined contributions in fostering the model of evolution where adaptation is seen as one of the critical elements in a species survival. This idea has diffused into many disciplines which have sought explanations of disaster behavior and survival including anthropology (Oliver-Smith, 1986), ethnology (Zoleta-Nantes, 2002), human ecology (Bruce, 1999), economics (Cole, 2004), sociology (Wachtendorf & Kendra, 2002), geography (Walters & Ravesloot, 2003) and psychology (Wallenius, 2001; Kaniasty & Norris, 2001). This reliance on a biological model toward adaptation to physical threats such as terror should not be surprising as disasters are and remain predominantly a natural physical phenomenon that threatens human populations. Adapting to these threats is therefore a chief means of survival, similar to adaptive behaviors to the

environment in the non-human world. But, unlike the ‘natural world’, human populations adapt by a combination of social and physical means that, on the one hand, mitigate physical threats and the other allow us to maintain and develop the basic constituent fabric of our social world.

For the most part, the disaster literature (like that in the biological and physical sciences) tends to use the term ‘adaptation’ as positive behavioral changes that individuals, family groups and communities initiate. These behaviors are associated with past experiences or are a response to present and potential expected disasters. Given this perspective, it is possible to argue that adaptation behaviors can be employed to gauge both physical and social survival success. ‘Inadequate’ adaptation behaviors due to lack of preparations, untimely changes or misplaced emphasis on mitigation, may lead to short/long term losses (i.e., deaths, injury, economic loss, trauma, etc.), thereby casting doubt on the adequacy, viability and stability of social groupings. In contrast, positive adaptation should lead to minimum loss or disruption of physical and social assets.

Social Resilience

Over time, this biological model of adaptation has slowly been transformed in the social science literature to reflect social rather than physical behaviors. In time, physical/biological adaptation was replaced with the use of such terms as social resilience. Social resilience as the ability by social groups to prepare, deal with and survive large-scale social and physical disruptions lies deep in our primordial past. It has taught us that ‘organizing’ is the most efficient and effective means to survive (Tory, 1979; Kauffman, 1994). The apparent chaos and threatening nature of disasters such as terror or other types of disasters— as unusual, uncontrollable and many times unpredictable events – facilitated the development of organizational means to restore order and normalcy and be prepared for future disaster events. Two organizing levels related to social resilience are most common: that of formal organizations such as various Homeland Security agencies and the more encompassing social organizations represented by the family and community. In the case of these later social groups, the latent structures that evolved to mitigate disasters usually lay

dormant and are only activated when needed, with new forms of adaptive behaviors emerging in reaction to but also in preparation for expected disasters. Such adaptive behaviors permeate all levels of social activity and reinforce social resilience (Oliver-Smith, 1986).

In a large sense, social based adaptive behaviors as a form of social resilience reflect long dormant historical preparedness behaviors already in place. As these adaptive survival behaviors are indigenous and organic within families and communities, their tangible expression would be expected to increase chances for survival and post-disaster reconstruction of the community's social fabric after, for example a terrorist bombing. They would also render the impact of future terror acts less potent. Recent studies have in fact suggested how the strength of family and community social networks – as a indirect proxy for adaptive behaviors - leads them to be better prepared for various kinds of disasters (Kirschenbaum, 2004). In addition, there are a large and varied number of disaster case studies that indirectly support this viewpoint (Phillips, 1993; Rubin, 1981; Center for Natural Hazards, 2000).

Survival Modes

In general, the chances of surviving most types of disasters have a lot to do with how well an individual or family is prepared (Kirschenbaum, 2001). This survival mode evolved from the learning curve of historical experience (Kirschenbaum, 2001a) and has led to specific types of adaptive behaviors associated with pre-disaster preparedness (Enders, 2001) and post-disaster coping (Norris et al, 2003). Common sense tells us that persons threatened most by natural and human-made disasters would likely adapt their behaviors to be prepared for their possible reoccurrences. Such adaptive preparedness behaviors are, I believe, one of the foundation blocks for societal resilience. This same type of adaptive behavior should also apply to terrorism as it has applied to other types of natural and human-made disasters. Yet, very little evidence is available to directly substantiate this claim. Researchers have found, for example, that when directly faced by non-terror emergencies and disasters, some individuals

and families are more prepared than others (Kirschenbaum, 2003; Seitz, 1998). They have adapted their behaviors to the contingencies facing them. Yet, some are more receptive to critical information about how to increase their chances for survival and others more willing to implement the advice that is given them (Perry & Lindell, 1991). Some will evacuate and others not (Sorensen & Mileti, 1989) Kirschenbaum, 1992). Some will move out of high-risk areas and others stay (Kirschenbaum, 1996). Men and women perceive and react to disaster threats differently (Enarson & Phillips, 2004). This imbalance in adaptive social behavior that is evident in various types of disasters may also apply in the case of a terror threat¹.

Adapting For Future

The majority of research literature devoted to the study of behavior of populations facing disaster threats and/or actual terror acts have only occasionally looked at how potential victims adapt themselves to these kinds of disaster events. For the most part the adaptation process is taken for granted or at least assumed. Most studies, however, that are available deal with post-disaster coping behaviors from a medical or psychological trauma perspective (Ursano & Norwood, 2003; North & Pfefferbaum, 2002; Schuster et al, 2001). Unlike adaptive behavior that prepares possible victims for potential threats, coping behavior tends to deal with reactions to recent past events. The clear implication is that individuals or families have prepared for the last disaster rather than preparing for a future disaster. Thus, I will argue that coping can be viewed as an adaptive behavior if behavioral changes due to past events lead to being better prepared for new or unexpected future terror related disasters.

I further argue that to look at adaptive types of behavior as a means of increasing “terror resilience” to potential expected events, researchers should focus on the *actual behaviors* that people engage in before a terror incident. From this

¹ The controversy concerning if terror is a disaster event promoting consensus types of social behaviors or a special type of conflict-event has only recently been argued in the literature; with the empirical evidence seeming to support the notion that terror acts are a combination of both (Peek & Sutton, 2003)

perspective, adaptive behaviors are viewed as an integral part of the social mechanisms involved in general social resilience that find their expression in individual, family and community preparedness actions. Such adaptive survival behaviors usually develop over a period of time, become institutionalized and emerge as organized family and community group behavior during crises (Dynes et al, 1990; Parr, 1970; Quarantelli & Dynes, 1970). Some even argue that responses generating such self-organizing adaptive behaviors represent one type of emergent group response (Granot, 1996; Neal and Phillips, 1995). Several major studies have affirmed the significance of emergent groups as potential mechanisms of adaptive behavior as they tend to appear in all phases of disaster (Quarantelli 1985) and facilitate the involvement of previously marginalized population groups (Neal & Phillips, 1990).

Latent Adaptive Behavior

I previously put forth the proposition that latent adaptive behavior is embedded in most types of social groups and most easily recognizable in various forms of preparedness behaviors that emerge during times of crises. In the case of terrorism, being a relatively new form of disaster, such latent behaviors may be garnered from past experiences or extrapolated from familiar disaster or crises events. From anecdotal information in Israel after suicide bombings, people tend to avoid crowded areas such as shopping centers or public events; others minimize travel on public transportation. In addition, there appears to be a dramatic increase in daily contacts among family members. These trends seem to hold over extended periods and be reinforced with additional terror acts. A second assumption I would like to propose is that such adaptive behavior would be honed over time to maximize efficiency and effectiveness. The time-honored learning curve of experience should, according to this assumption, winnow out what not to do and select behavior crucial for survival. Trial and error over centuries, along with modern technology and information systems probably facilitate the transfer of critical social disaster information inducing adaptive behaviors. Integrated into various social junctures of our social world, this

information creates sets of preparedness behaviors in cases of emergencies and disasters (Kirschenbaum, 2002). A result is greater resilience at the individual, group and societal levels. What I do not assume is that the implementation of these organizational forms of adaptive resilience will be consistently rational (Fisher, 1998).

As adaptive behaviors are not uniform, this means that potential victims adaptive actions may depend partly on their socio-cultural background (Phillips, 1998). Such factors as age, gender, education and marital status have been found to affect how we prepare and act in emergencies (Kirschenbaum, 2003). Ethnic, religious background and gender frameworks (Phillips, 2002; Fothergill et al, 1999) have also been cited as well as past experiences with disasters and how we perceive of the present and future risks involved (Kirschenbaum, 2003a). Embedding these individual background variables into such basic social units as the family and community broadens the foundation for understanding the context of how adaptive behaviors develop.

Preparedness as Adaptive Behavior

I further contend that examining preparedness is a critical benchmark in gaining an insight into how terror or, for that matter, other types of disasters affects adaptive social activities. As an adaptive behavioral social act, preparedness reflects our reactions to potential threats based on both past knowledge or experiences as well as alternative scenarios related to the present or expected situations. The strength of the perceived risk, for example, may affect the degree to which we are willing to be prepared (Kirschenbaum, 2004). Cognizance of the possible physical, economic and social consequences to family, community and us may also trigger certain preparedness behaviors. Taken together, such factors leading to preparedness should theoretically reflect how we would adapt our behaviors to present or future disasters as a terror assault².

² The impact of risk perceptions on preparedness is limited to specific environmental disasters and strongest for those preparedness behaviors that are more immediate, concrete and easy to achieve (Kirschenbaum, 2005, under review).

A recent breakthrough in defining disaster preparedness (Kirschenbaum, 2002) has opened the way to utilize this concept in the study of terror. It both empirically and theoretically goes beyond previous studies seeking the underlying behavioral basis of preparedness (Gillespie & Streeter, 1987; Russell et al, 1995). Previous research had commonly examined “preparedness” as a single overall construct (Larson & Enander, 1997) or divided it into an activity or perception (Russel, et al, 1995). Kirschenbaum, however, found that preparedness to be empirically composed of a number of identifiable sub-components labeled ‘provisions’, ‘skills’, ‘planning’ and ‘protection’ each being predicted by different independent variables. As the data used to generate these preparedness components did not include terror, two alternative avenues to take advantage of these preparedness components avail themselves; namely incorporating appropriate terror related adaptive activities into each category and/or create a separate additional component focusing specifically on adaptive terror behaviors.

In both cases the aim is to provide a conceptual platform to both describe and explain why some categories of persons and families are more prepared than others and if such behaviors are directly related to adapting to potential terror threats. In the first case, for example, making efforts to avoid large crowded public events could be introduced into the “planning” preparedness component. Purchasing a hand weapon would fit into the “protection” category. As a second alternative, to broadening the four major preparedness components, we might also add a fifth independent component composed solely of actions that reflect adaptive behaviors to terror threats. These might include, for example, not traveling in buses or trains, and when doing so, sitting in a seat less likely to absorb the impact of a homicide bomber, not listening to news programs reporting terror incidents, keeping away from stores that do not have a security guard posted outside, and so on. This decision can be made only when a better understanding of terror adaptation behaviors become available.

Terror Preparedness

Little empirical evidence is available, except anecdotal narrations or medical trauma cases (Brown et al, 2003), of how terror threats (or attacks) have affected our adaptive preparedness behavior (Strous et al, 2003). The majority that are available relate to post-terror events and its psychological aftermath. Even the two major documents of the 9/11 terror attacks on the United States, the Commission Report (9/11 Commission Report, 2004) and the Natural Hazards Center review of post 9/11 research (Natural Hazards, 2003) barely concern themselves with preparedness at the household level. Only a recent study evaluating the effectiveness of the US Homeland Security Terrorism Advisory System focused on the individual risks and preparedness for terrorism (Major & Atwood, 2004) and found that, like previous studies, concern and preparedness do not match. Other sources are available in the wave of post-9/11/01 that cover a broad range of post-impact behaviors in the United States, mainly in the form of quick assessment field studies (Natural Hazards, 2003) and longer term psychological impact surveys (Schlenger et al, 2002; Silver et al, 2002, Tricia xxx).

The increase in numbers and dispersion of organized terrorist acts, as a recent national American poll (Widmeyer, 2003) clearly showed, has made a considerable impact on the general American population. It has less affected European populations, but seems too gaining priority after the terrorists attack on civilians in Madrid. In the American case, most respondents understood that terrorism was a form of psychological warfare designed to cause fear and distress. Yet very few took actual measures to alleviate their fears and anxieties. Similar results were found in a US Department of Homeland Security's Terrorism Advisory System study of preparedness to terrorism (Major& Atwood, 2004) that showed 87.1 percent of the respondents reporting that terrorism is an important problem but with few respondents reporting having made any preparations for a future terror attack. A more restricted population

sample studying fears of terror at work and home (Roberts & Em, 2003) showed people to have a greater concern for security but this was expressed mainly as patriotism rather than preparedness. In general then, the recognition that terrorism is a threat seems widespread but actual behaviors leading to reducing this threat are marginal (at least in the United States). Does this mean that adaptation behaviors are not taking place? Before this can be answered, it is crucial to clearly understand what is meant by the term “adaptation”.

Types of Adaptive Behaviors

The term ‘adaptation’ or ‘adapting’ has numerous behavioral meanings that are dependent upon and best understood in the context within which they are expressed. A host of concepts have been put forward in the scientific literature that encompass various focal points and perspectives. Thus, literature in the area of psychology has focused on adaptation through such concepts as “*coping*” and “*avoidance*” behaviors. These terms have related to specific individual cognitive behaviors as ways to deal with various forms of stress and stressors. In general, coping rather than avoidance behaviors have been most frequently cited in the disaster literature reflecting an interest in post-rather than pre-disaster behaviors. Arguably, emphasis on avoidance behaviors seems a more appropriate research strategy as it leads to specific types of pre-disaster actions that will increase the likelihood of survival and negative post-disaster consequences.³ A peripherally associated adaptive behavior that has been the focus of sociological research is that of “*social networks*”, as a form of both individual and group means for collective social support and safety. Some have viewed social networks as a post-disaster means of succor and support. In this sense, social networks act to buffer the disruption that disasters bring and reduce post-disaster trauma. From a more classic sociological perspective, however, the configuration of social networks as a pre-disaster phenomenon, based on family, friends, neighbors or

³ Taken together, these measures provide an excellent starting point to examine terror related behaviors. It is important to stress, however, that adaptive behavior prepares potential victims for potential threats while coping behavior in the psychological literature deal with behaviors associated with actual past events and their consequences (Folkman & Lazarus, 1980; Folkman et al, 1986).

acquaintances, are particularly useful in the adaptation process. The form, density and breadth of such networks provide a reliable social lifeline where information can be easily accessed and acquired, disaster roles emulated, preparedness responses quickly organized and group social capital utilized (Kirschenbaum, 2004/5?).

Other adaptive types of behaviors scattered throughout the disaster literature include behaviors aimed at seeking or obtaining medical or psychological “*professional help*”. The emphasis of many of these studies has been how the provision of these services at the organizational or individual level can help before as well as after a disaster (Rosenfeld et al, 2003). Taking advantage of such services (usually after a disaster but in expectation of future incidents) is an alternative way to adapt to new circumstances by taking advantage of expert information that is pertinent to maintaining physical and mental health.

Something akin to this type of adaptation behavior focuses on “*information seeking*” or keeping abreast of knowledge about particular threats. This type of behavioral change sensitizes us to seek reliable available sources of information. The assumption is that by focusing our behavior to actively seek information and/or knowledge, we will use this knowledge to increase our chances of survival.

One of the most prevalent types of adaptive behaviors mentioned in disaster studies is that of taking appropriate “*protective actions*”. This type of adaptive behavior has usually been described in terms of creating physical barriers such as building shelters, sealed rooms, living in reinforced buildings, making flood or fire barriers. Another type of such behavior has included temporary pre-determined evacuation due to flooding, fires or earthquakes as well as physically changing residence or job relocation. Sometimes mentioned, as a part of these protective actions, is the purchase of various insurance policies such as home (fire, flood), life and work disability insurance plans.

In addition to adaptive physical acts are those in the realm of “*religion and belief*” as well as taking the worst-case scenario into consideration by planning for an uncertain “*future*”. *Religious beliefs* have always played an important role in how and what we do before, during and after emergencies and disasters. Depending on one’s religious beliefs, various alternative behaviors are possible. Some may lead to inaction or action, forfeiting control or taking command and even accept or reject the inevitable disaster. Certain religious beliefs promote the concept of “fate”, “harmony” or “natural order”, while others promote a belief-action system based on a “this worldliness” perspective emphasizing control and change. Finally, in line with these forms of adaptation behaviors are those that are “*future oriented*”, behaviors that would normally not appear except in cases of potential crisis, emergency or disasters where it is assumed that someone in a family unit may be injured or killed. The range of such behaviors include providing financial security such as preparing a will or setting aside assets and may even include arranging a burial plot.

Israeli Reality

In Israel, public sector emergency agencies have made great strides to prepare the majority of the population for the threat of a non-conventional war but have been lax in the area of terror management, especially in understanding and dealing with the impact of terrorism on daily and long term behavioral changes. For the most part, the emphasis has been on monitoring and digesting information from terror acts (Center for Study of National Security, 2004; Interdisciplinary Center Hertzlia, 2004; Israel National Trauma Center, 2004) and incorporating this information into security and rescue organizations. There is little doubt that Israelis, more so than their American counterparts, perceive themselves to be at risk of being injured or killed in a terror incident.

Insert Chart 1 - Terror Acts

This evaluation is evident in the fact that since 1948 with the establishment of the State of Israel, there have been close to 2,700 terror acts peaking at several

time periods; 1955 (130 attacks), 1996 (114 attacks), 1999 (180 attacks) and 2002 (226 attacks). In the past five years alone, over 10 percent of Israelis were directly involved in a terror attack with close to a third knowing someone who was killed or injured. Over 90 percent expressed moderate to high levels of fear that a terror act will harm them or their family with close to two-thirds (61%) recognizing that terror groups are capable of mass murder. More chilling is that over eighty percent (83%) recognize that major terror acts will almost certainly lead to terrible injuries. The sheer number of actual and attempted homicide bombings, dead and injured reflects this reality. Over 100 homicide bombings alone has killed and injured over 10,000 Israeli citizens. In the past three and a half years, the Hamas (a radical Islamic terror organizations) has, in 425 attacks, killed 377 Israelis and wounded 2076. The Hamas perpetrated 52 suicide attacks, in which 288 people were killed and 1646 were injured. (Jerusalem Post, 33/3/04).

These continuous acts of terror in Israel have generated only a modest number of studies of its impact on civilian behavior (Gidron et al, 1999; Granot, 1998; Bleich et al, 2003; Moghadam, 2003; Gidron et al, 2004; Strouss et al, 2004; Waisman et al, 2003). In contrast, the unusual number, extent and types of injuries from terror attacks, have warranted prominent reports in medical journals (Peleg et al, 2003; Peleg et al, 2004; Einav et al, 2004). One notable exception to the paucity of research on terror related behavior was a study of preparedness in Israel (Israel Homeland Command, 2001) prior to the recent Palestinian terror campaign that found significant differences in preparedness behaviors for conventional and non-conventional disaster threats (Kirschenbaum, 2003). These findings provided the first concrete empirical hint that terror would also likely have a differential impact of how people would react and adapt their preparedness behaviors to increase their chances for survival.

Adaptive Terror Preparedness (ATP)

The lack of empirical studies to set a theoretical framework to examine adaptive preparedness behaviors due to terror led me to seek examples from the broader

disaster literature under the assumption that terror is a specific subcategory of general disasters. In reviewing the literature, certain explanatory variables have been proposed to explain why some persons, households or groups, in the face of various kinds of disasters, are more prepared than others. A large number of disaster case studies have indirectly looked at this issue, especially in the evacuation literature in trying to explain why certain groups move out of harms way and other do not move (Perry et al, 1981). In more focused empirical research, researchers have found levels of preparedness to be associated with the characteristics of the person such as age or gender; others have focused on perceptions of risk and previous experiences (Fothergill et al, 1999; Phillips, 1998) as well as the intensity of their social networks (Kirschenbaum, 1992; Bland, et al, 1997; Kanaisty & Norris, 2001). These findings support the notion that adapting behaviors that foster preparedness are not random acts but based on a broad set of background conditions. Incorporating these arguments into a theoretical working model (See Figure 1) illustrates the link that terror related adaptive behaviors have to strengthening social resilience and simultaneously the possible antecedent conditions delineating such behaviors.

Figure 1 About Here

The model suggests that behaviors that lead to being prepared for disasters are influenced by a series of independent variables that range from the basic socio-demographic characteristics of the person, his/hers past experiences with disasters, the type, intensity and range of social networks, how risks are perceived, how information is obtained and basic emotive feeling such as fear. The generation of preparedness actions includes five sets of behavioral components including actions leading toward having stocked supplies, gaining appropriate skills, making family related plans and investing in protective equipment. The fifth component, adaptive (terror) preparedness (which will be defined in greater detail below), is more complex as it reflects behavioral changes to fit changing situations.

Research Design

Strategy and Design:

Adaptive behaviors occur over time. To understand their development ideally requires a longitudinal study that contrasts behaviors at various points in time. However, employing a cross-sectional type research strategy can discover the results of this process at a specific point in time. Given the fact that terrorism in Israel has been present over a 50 years period of time, and especially so during the last five years, the likelihood that such terror related adaptive behaviors have taken place is very high. To partially overcome the deficiency of a cross-sectional study, the design also incorporated an assessment of behavioral changes from past events so as to put the results into a more historical context. In addition, emphasis was put on examining actual adaptive behaviors rather than attitudes or predispositions that are more fickle to immediate short-term events. The research was therefore designed as a field survey incorporating a structured questionnaire. The sample was obtained through a random-digital-dial computer-assisted telephone interview of households in Israel. The interview lasted about 20 minutes with a total of 800 households interviewed over a two-week period. The response rate was over 30 percent with randomly chosen alternative households making up the deficit with the aim of closely as possible matching the basic characteristics of the Israeli household population. Included in this survey were questions covering a broad range of areas and variables theoretically linked to disaster related behavior (Quarantelli, 1998; Lindell & Perry, 1992) and especially behaviors that would provide potential indicators of adaptive terror preparedness. (ATP)

Data

The 800 heads of households randomly interviewed provided a broad and fairly accurate picture of Israel's population. The sample itself had a slightly larger proportion of women (56%) than men (43%), concentrated in the 30-60 year old age groups (54%). Most household heads were Jews (83%) married (65%)

having three or more children (45%), college educated (48%), salaried employees (47%) with average and above average incomes (51%), owned their own homes (70%) and car (65%) and had served in the army (49%).

Basic Variables

Adaptive Terror Preparedness (ATP) was developed on the basis of a previous preparedness scale developed by Kirschenbaum (2002) but with terror related behavioral items added to the measure's four major components and as an additional independent fifth component. The original Preparedness Components Scale (2002) was built around a factor analysis of 31 separate items primarily describing preparedness behaviors for non-terror (but included non-conventional) type disasters. These same variables were also included and factored in the present interview schedule verifying the results of the original study's four basic preparedness components (i.e., supplies, skills, planning and protection).

Given the wide variety of possible adaptation behaviors such as avoidance, religious experiences, seeking professional help, protective actions, etc., a pilot study was initiated that asked people to list behaviors "that other people you know or yourself have done because of the recent terror assaults". From this evolved forty-nine (49) specific measures of behavior directly related to (present and past) terror activities, including murder, bombings, homicide, small arms attacks, road bombs, drive-by shootings etc.). Measures included personal and family actions (purchased a cell phone, made a will, bought private health insurance, avoidance behaviors (e.g., not taking busses, keeping away from shopping malls, etc.) as well as social support type behaviors (e.g., discussions, therapy, praying, etc.), seeking professional help (visits to psychologists, physicians, etc.) and even preparing for being killed by terrorists (making a will, purchasing a burial plot, etc.) Table 2 details these measures.

Table 1: List of Adaptation Constructs

Due to both the length and type of survey method (telephone), the questions were made succinct and easily answered being either measured as a short Likert Type Scale (1 to 3 or 4) or as a simple dichotomous response (yes, no). This facilitated high response rates and question completion. In nearly all cases, the adult household respondent was asked to indicate if she/he had *changed* their behavior in light of the terror attacks that were occurring.

The Social Context of Terror

The results of the survey indicated that twelve percent (12%) of the respondents reported that they had been personally present during a terror attack. As nearly all such terror attacks were directed at Jewish Israeli citizens, this meant that about 600,000 people were involved in one way or another in a terror attack. This figure matches other surveys (NSC, 2003-2005) and is indicative of how individuals perceive themselves to be involved even if only peripherally. For example, a person in a crowded shopping mall would likely consider her/himself involved in a terror attack even when the suicide bomber selects only one store to explode him/herself. Being there and witnessing the carnage, even though not being a direct victim, is apparently enough to foster identification as a victim of a terror attack. Of those who reported themselves involved in a terror attack, most followed the instructions of security personnel (48%) but a sizeable proportion already knew what to do (21%) or followed their own intuition (10%). These 'self-help' patterns of behavior signify the influence of social rather than organizational bound sources of disaster role modeling and reflect previously embedded sets of adaptation behaviors (Kirschenbaum, 2003).

Table 2 About Here: After Terror Assault

The data also demonstrated the broad ripple effect of the terror attacks on non-direct victims. A large portion of the sample (60%) knew one of the terror victims, an indication of the secondary impact that terror has had on the entire population. Thus, for those not reporting they were involved in a terror attack,

close to sixty-percent (60%) knew the victims. These included family members (28%) and acquaintances (30%). This indirect impact follows and indeed supports the argument that the effects of a disaster go far beyond the physical boundaries of the epicenter and follow along social network paths that encompass both family and friends (Kirschenbaum, 2005).

Adapting Behavioral Changes

As one of way to assess the degree to which terror had affected the behavior, respondents were asked about how they now usually behave in response to potential terror attacks in Israel. Of the approximately forty items (40) derived from a pre-test open-ended questionnaire, nearly all were phrased to evaluate if respondents changed their behaviors as a result of the terror attacks. Overall, the data strongly suggest that the majority of the respondents were proactive in their behavioral changes toward potential terror attacks. They did not simply act passively under the assumption that “it won’t happen to me” “ or the government will take care of the problem” but made cognitive adaptive changes to the situation in order to increase their chances for survival. Underlying these changes was a clear understanding that these attacks would continue (which they did). Fifty years of terror that now included homicide bombers and a frequency in destruction with little respite or expectation that it would cease.

To gauge the degree of behavioral change associated directly with the terror campaign directed by the Palestinian Authority, respondents were asked for example, to react to a series of statements. For example, “I now try to avoid going to places that are crowded”; “I pray more”; I try to go only to places that have security guards”; “ I try to travel on relatively empty busses”; and ” I sleep more”. (See Table 3) The degree to which the respondents positively responded to these statements was employed as a proxy of the degree to which they adapted their behavior to a situation where terror attacks became a daily routine hazard.

Table 3: Basic Terror Adaptive Preparedness Behaviors

The results of Table 3 are ranked in terms of positive responses to the adaptation behavioral statements. These sets of ranked changes are extremely difficult to categorize as they form a mixture of behavioral changes that range from avoidance, protection, religion and/or coping to reliance on social networks and even in seeking professional help. As these responses are not independent of each other, there is a good chance for multiple types of behavioral changes. The most deep-seated types of change, however, focus on four separate issues: (1) people now more often seek mass media information in the case of a terror attack (89%), (2) pay more attention to security updates (88%), (3) are in more contact with family and friends to make sure everything is fine (84%) and (4) have become more aware of suspicious persons who may be potential terrorists (84%). This is followed by (5) more often using a car (to avoid taking busses) (69%), (6) keeping away from what is perceived to be dangerous places (61%) and (7) being willing more often to talk to others about feelings related to the horrors and fear of terror (60%).

On a more practical day to day adaptive behavioral change given the ongoing terror, are the samples (8) a greater willingness to now help terror victims financially (52%), (9) diminishing their use of public transportation facilities (47%), only going to shops or restaurants where security guards are posted (43%), (10) only traveling to visit family/friends or work by car (43%), (11) and taking the time and effort to call security services when something seems suspicious (42%). Other respondents indicated that they changed their behavior when it came to (12) taking measures so as to not being identified as Jewish when traveling abroad (38%), (13) seeking Gods help more (35%), purchasing life insurance as a hedge against getting killed in a terror attack (34%), (14) and taking out private health insurance plan to cover medical expenses if hurt (32%).

Between twenty to thirty percent of the respondents ‘prayed more’ (29%), keep their cars at a distance from busses (prime suicide bomber targets) (27%), traveled less by bus (27%), began to seek emotional support from family and relatives (26%), reduced their travel plan abroad (25%), bought work disability insurance (24%), avoided peak rush hour travel (23%), and started to take taxis more often (22%). The remainder of the behavioral changes, noted by less than twenty-percent of the respondents, reflected a broad mix of adaptive behavioral changes. These included where to sit on busses to survive a homicide bomber (18%), smoking more (9%), taking tranquilizers (4%) and even buying a burial plot (2%).

Risk Perceptions of Terror

To support the argument that adaptation to terror as a form of disaster is a result of behavioral changes linked to past events but in expectation of potential future terror attacks, the respondents were asked, “what are the chances that the following events would occur in the next two years? And “where are they most likely to occur”? The overall results showed a pattern whereby risk perceptions focused primarily on terror in its related forms. Such perceptions were bolstered by the expectation that concrete physical targets that had been used in the past by terrorists would most likely be their future targets. As to their own chances of being a victim of terror, most still saw the anonymous other as the prime target even though they still considered themselves and family as potential victims. In short, risk perceptions revolved around the high likelihood that a terror act would occur.

As the data from Table 4 reveals, the typical perception of the risk of non-conventional attacks paled in contrast to those associated with terror. Focusing on high risks perceptions, four-fifths (80%) of the respondents felt the risk of a suicide bomber or a terror bomb was highly likely. Two thirds (66%) expected a missile; katusha or mortar attack within the next two years; a quarter (24%) saw a high risk of a terror initiated environmental disaster and somewhat less (17%)

poisoning of the water or food supply. These risk perceptions are in sharp contrast to expectations of a biological (7%), chemical (7%) or atomic (4%) attack. Even the risk perception for a natural (10%) and industrial (14%) disaster figured somewhat higher.

Table 4 About Here (Risk)

When asked *where* they thought a terror attack was most likely, about three-quarters (72%) expected it to be at entertainment centers and/or a public transportation facility (80%). This meant that attractive targets for terrorists (especially for homicide bombers) were perceived to be places that attract large crowds providing the potential for numerous casualties. Airlines (18%) and infrastructure (14%) were seen as secondary targets. When asked to respond to the possibility that they, their families or others would likely be future targets, most (51%) indicated that it was the anonymous other rather than themselves (14-15%) would likely be the victims.

Gender, Educational & Age Differences

Examining if these adaptive terror preparedness behaviors differed by key social-demographic characteristics demonstrated the complexity of such behaviors. The data in Table 7, based on Chi Square comparisons of the adaptive behaviors by gender, educational attainment and age clearly show that specific types of behaviors significantly differ for men and women, those with more education and older in age. For the most part, both men and women appeared to similarly adapt their behaviors to the terror attacks and potential terror threats. Only fourteen of the forty-nine adaptation behaviors showed significant differences between men and women. To some extent certain of these changes in behavior reflect traditional gender roles while others do not. For example, women more than men readily changed their avoidance, religious, information seeking and coping behaviors. This took the form of becoming more cautious by only going to places where there was a security guard or avoiding taking busses. Women also tended to pray and seek God more, contacting friends and relatives to make sure they were safe as well as listening more often to the radio/TV, talking about their feelings, taking tranquilizers and seeking out relatives to assuage their emotions. Men, on the other hand, were more likely to take out work disability insurance and obtain a gun license or volunteer for the local community civil guard services than women.

Table 5 About Here (gender differences)

In general, educational attainment differences, like gender, did not have an all-embracing impact on the degree to which household heads changed their behavior; with only sixteen of the forty-nine adapting items showing a significant difference. However, the significant differences that did appear tended to be concentrated in certain areas. For example, educated household heads - in contrast to those less educated - avoided crowds, travel abroad, unsafe areas, sought places of leisure or stores with security guards and listened to radio/TV more. They significantly sought professional help by more often

visiting physicians and psychologists than those less educated and made use of social support services through strengthening friendship networks and utilizing a social welfare hot line. In addition, educational differences acted to induce greater differences in religiosity through prayer, seeking God and attending religious services. Here too, as with various coping behaviors as sleeping more, consuming alcohol more than usual and smoking, significant differences arose favoring the more educated households.

Unlike both gender and education, age had a major impact on the degree to which adaptation behaviors were invoked. Two-thirds (31/49) of the adaptation behaviors were shown to be significantly different by age. The data reveal that depending on the specific type of adaptation behavior, being younger or older had its advantages as well as disadvantages. For example, certain adaptive behavioral changes were found to be the penchant of younger household heads toward increasingly keeping informed about what is happening (listen to radio/TV, update on security) while seemingly the opposite for older households in their desire to avoid terror related news (avoid listening to radio/TV). Again, younger in contrast to older persons entertained friends and family at home rather than going out as well as now indicate they are keeping away from what they perceive as dangerous places. Yet, older household heads are more suspicious of potential terrorists than younger persons as well as tend to empathize more with the terror victims (give money to victims).

Interestingly, older persons now attend religious services more often than before, take out disability and life insurance, obtain a gun license, join the civil community based guards and choose to drive a car over public transportation. Their younger counterparts opt for private health insurance, have upped their intake of tranquilizers, see their physicians more, seek emotional help from relatives but still pick public transportation over private cars. These types of adaptive behaviors to terror are also apparent among older persons who now see psychologists and psychiatrists, drink more alcohol, use the emergency hot line, express themselves by telling black humor

jokes about terror and are more expressive in talking about their feelings. The age significant differences are also apparent in that older households have more often changed their workplace and/or residence (perhaps out of fear of being near a prime terror target) and have actually prepared their own funeral eulogy. Younger heads, on the other hand, have gotten their will and list of their assets in order and even purchased a burial plot for themselves and family.

Overall, the impact of gender, educational attainment and age on adaptive behavioral changes in light of past and potential terror attacks is very mixed. At this stage it is extremely difficult to decipher how they intersect to generate a predominant and clearly defined behavior that can predict adaptive terror preparedness. No singular or dominant pattern seems to emerge. For this reason, the next step in the analysis will explore if these basic adaptive type behaviors touted in the research literature can be simplified both theoretically and empirically.

Components of Adaptation

The large number of potential adaptation behaviors available for individuals to imitate, and the potentially complex sets of characteristics that could initiate such behaviors, made examining the concept of adaptation extremely tenuous and unmanageable. To obtain a more parsimonious construct led to seeking a set of representative components that, on the one hand, provided the substantive meanings of adaptive preparedness behaviors, and on the other, could be more easily empirically examined. To this end, the forty-nine behavioral attributes associated with adaptation were entered into a factor analysis, a statistical procedure aimed at reducing the large number into a more compact but still meaningful set of adaptation components.⁴ Taking these measures and generating

⁴ From the outset, it was clear that the basic explanatory concepts put forward by researchers in various disciplines would act as the base line for delineating and measuring the adaptation behaviors. These concepts were transcribed to measure them in a contextually appropriate manner that reflected the reality of terror that affected the respondents. Thus, the preliminary pre-test “open-ended” questionnaire to discover various forms of adaptation behaviors related to terrorist activities was guided by these base line constructs.

a factor analysis led to discovering eight (8) major adaptation components related to the terror context. As Table 6 reveals, nearly half (22/49) of the adaptation measures could be clustered into eight distinct components reflecting distinct aspects of adaptation behaviors. Together they explain nearly 43 percent of the variance. To a large extent these components reflected the constructs already alluded to in the research literature.

Table 6 About Here (factor analysis)

Exploring various permutations of the optimum number of factors that could be derived from the factor analysis – in terms of their substantive cogency and explanatory relevance – led to the choice of eight components. As the data in Table 6 reveals, they include in order of robustness: (1) avoidance behaviors, (2) religiousness, (3) seeking professional help, (4) purchasing insurance, (5) information seeking (6) future plans, (7) coping behaviors, and (8) taking protective actions. Avoidance behaviors basically focus on avoiding places where terrorists have, and are likely, to inflict the most damage on people and property. Thus, crowded places such as shopping malls or public transport are avoided while homebound entertainment is substituted for outside leisure activities. The second component, religiosity, reflects a type of behavioral adaptation to terror that combines belief and social support. Praying more and seeking God utilize a belief system to unravel and understand the reasons for and consequences of terror while attending prayer services with fellow congregants provides a setting for mutual and supportive social network interactions. The third component, seeking professional help, represents the utilization of professional resources to alleviate physical or emotional symptoms of fears and anxieties. Professionals such as physicians, psychologists and psychiatrists form such a pool of resources. As a means to hedge bets against the possibly being a victim of a terrorist attack, a fourth component of behavioral change emerged, namely the purchase of insurance. This component included taking out life insurance, work disability insurance and private health insurance, types of

adaptive preparedness behaviors that are unlikely to lead to immediate change but certainly may have an impact on future actions. A fifth component, seeking information is more immediate in its impact as it leads to social activity aimed at collecting and assessing information that will (hopefully) affect short-term activities. Thus, keeping updated about the security situation primarily through the mass media (radio/TV) is a prime means of this behavioral component. For some, it leads to avoiding information sources, especially as they involve vivid horrific scenes of destruction caused by terrorists on television and in newspapers. Similar to but related more to a long-term means of ‘hedging bets’ are those behavioral changes related to making future plans. This sixth component is composed primarily of behaviors that assume the possibility that a terrorist attack will lead to their death. Here, we find heads of households making out their last will and testament, getting their assets in order, purchasing a family burial plot and even writing their own eulogy. A seventh adaptation component coping behaviors, appears to reflect changes in behavior that are physical manifestations of ways to mitigate or dampen the stress and strain that terror has imposed. To this end, we find this component represented by the increased consumption of alcohol and cigarettes. What is unlikely is that these forms of behavioral change could be interpreted as drug abuse. The last adaptation component, taking protective actions, closely matches behavioral change with a physical change. A protective action in this sense emerges as a radical decision to actually change the household heads residence and or job site. This type of behavior is likely to signal the importance of physical proximity to potential terror targets.

Degrees of Adaptation

It should also be recalled that when originally asked if the respondents had changed their behavior in light of the terror attacks by Palestinian Arabs on Israeli citizens, the distribution of positive responses ranged from as high as 90% to practically no change at all. This could be interpreted to mean that adaptation was not a universal phenomenon nor when applied may not have been totally appropriate to the situation. For example, keeping away from crowded places may have been selective to only sites where anonymous crowds gathered and not to where family related leisure or celebrations were held. Thus, it is difficult to decipher the actual degree of adaptation that may have been negative by acting counter or in disregard to terror threats as well as the assumed positive actions. By utilizing the distribution of eigenvalues of each component, it is also possible to obtain a sense of the degree to which household heads put emphasis on both these positive and negative adaptation behaviors⁵.

Insert Table 7 Degree of adaptation

The data in Table 7 reveals that the degree of adaptation tends to fall within the in the more moderate levels of behavioral change. It appears that rarely do people go to either extreme by radically changing the behaviors in preparation for what they expect to be additional terror attacks or in total disregard for the realities of the situation. The vast majority either exhibits a moderate positive or negative behavioral change. In some cases it weighs in favor of more positive adaptive change and in others it does not. The actual spread of the weights differs for each adaptation component with 'seeking professional help' (-8.4 to +9.2), 'making future plans' (-7.8 to +7.5) encompassing the most widespread changes and 'seeking information' (-1.8 to +5.5) the least spread. In addition, the avoidance component is nearly equally divided between those who positively and negatively have adapted their behaviors. This also holds true for the

⁵ *The weights of each specific component were based on an equal four-way division of the range of the eigenvalues for each component. The categories were split at the zero point with positive and negative values equally divided into two equal categories. It should be noted that this range differed for each component.

protective, insurance and coping behavioral components. In the case of the component reflecting seeking professional help, there is a definite lean toward a positive change. For the component involving seeking information, there seems to be a negative change.

Summary and Conclusions

The object of this study has been to seek an understanding of how Israeli society and in particular its citizens have managed to survive the continuous assault by Palestinian Arab terrorist on the basic social fabric of Israeli society. Terror, like other types of disasters disrupts social and economic societal functions. In the case of Israel, this does not seem to be the case! I argue here that the prime reason for the marginal impact of terror in Israel has been that individuals, families and larger social groups have adapted their preparedness behaviors so as to minimize its impact. This argument has its basis in an underlying assumption that both in nature and in society, adaptation has been a prime motif for survival and development. The process of behavioral adaptation is not new; and it has been employed in a wide variety of contexts in many scientific disciplines. For the most part social adaptation is seen as a response to past events in expectation that something similar will likely occur again. This would mean that we learn some things from our past, selectively incorporate them into our social behaviors and modify them in light of perceived risks. *In a sense, adaptation behaviors are a hedge against future disasters.*

To test this argument, a national random telephone survey of a representative sample of households was very recently generated. Eight hundred heads of households were asked to report on their behaviors that were related to the recent terror attacks over the past years. A pilot study based on various constructs of adaptation cited in the scientific literature was then formulated to decipher the multiple measures of adaptation behaviors. These measures were then incorporated into the final questionnaire survey. Close to fifty specific

types of behaviors were measured along with socio-demographic background, risk perception, social network, past experience, emotive and information variables.

The preliminary results showed that terror attacks have affected a large number of the respondents. Over 12% stated they were personally involved in a terror attack, and for those not involved, over a third knew the victims, be they family or acquaintances. For the most part, the sample indicated that they could expect more terror attacks particularly suicide bombers and other types of terror explosions and felt that the major targets would be centers of entertainment and public transportation. For the most part they expected that anonymous others would be the victims rather than themselves and family. When asked if they had changed their behaviors in expectation of additional terror attacks, there appeared a wide range of responses to just about all the measures of adaptation, from 90% who responded that they listened more to radio/TV and being updated on security matters to close to none who went to seek professional help at a psychiatrist.

This wide range of adaptive preparedness behavioral changes to deal with expected terror attacks suggested that it might be due to basic characteristics of the sample. For this reason, age, gender and educational attainment of the respondents were matched against each of the adaptation behaviors. For the most part, there seemed little statistically significant difference in adaptive changes between men and women or by the level of educational attainment. Those specific adaptation behaviors that did differ by gender or education did not show any particular unique pattern. For age, however, differences

were quite consistent, covering nearly two-thirds of the adaptation items. What did not appear, however, was a consistent pattern that could be ascertained to explain variations in adaptation behaviors, as due to either being young or old.

These results confirmed the complexity of the multiple measures of adaptation behavior and led to a further step in the analysis, namely trying to reduce the (49) items into a more reasonable cogent set of constructs. To this end, a factor analysis was performed resulting in a parsimonious set of eight (8) components. These included in order of robustness: (1) avoidance behaviors, (2) religiousness, (3) seeking professional help, (4) purchasing insurance, (5) information seeking (6) future plans, (7) coping behaviors, and (8) taking protective actions. Capturing 22 of the 49 separate items and explaining over 40% of the variance, these adaptation terror preparedness behaviors provided a set of construct items that could be made appropriate to measure various other disaster related adaptation behaviors. The creation of these components now provided an important additional opportunity to scrutinize both the direction of the change and its intensity. Utilizing the unique factor weight distributions for each component that ranged from negative to positive, it was found that most of the respondents actually made very moderate changes in their behavior – both in the direction of either ignoring the terror threats or in taking them into account. Radical changes in behavior, in either direction, were minimal.

Implications

These results suggest several significant aspects toward answering the question how Israeli citizens have managed to survive one of the most ferocious terror campaigns against both the state of Israel and its Jewish citizens over an extended period of time. From the data presented here, it appears that a prime component in the survival strategy has been behavioral adaptation. Such adaptation is, for the most part, reflected by moderate rather than radical behavioral changes. This does not mean, however, that such behavioral changes are universal or that they are always proactive. There also appears a type of reactive adaptation that seems to fall back to a previous stage of disaster behavior, one that is also moderate but perhaps rooted in previous experiences. Of the eight focal components discovered, the various forms of adaptive preparedness for expected terror attacks seemed to be directly related to the form of the threat, dictated by specific types of perceived risks. The majority of these adaptation behaviors are physical in nature in that they require changes in social actions. Such actions are a means of coming to terms with reality while simultaneously depriving terrorists of their main objective, the disruption of “normal” social and economic life. The “normal” of the past is transcribed into the “normal” of the present and future when adaptation takes place, where terrorism becomes a part of everyday life.

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Figure I:
Working Model of Factors Influencing Adaptive Terror Preparedness
Behaviors and Levels of Social Resilience

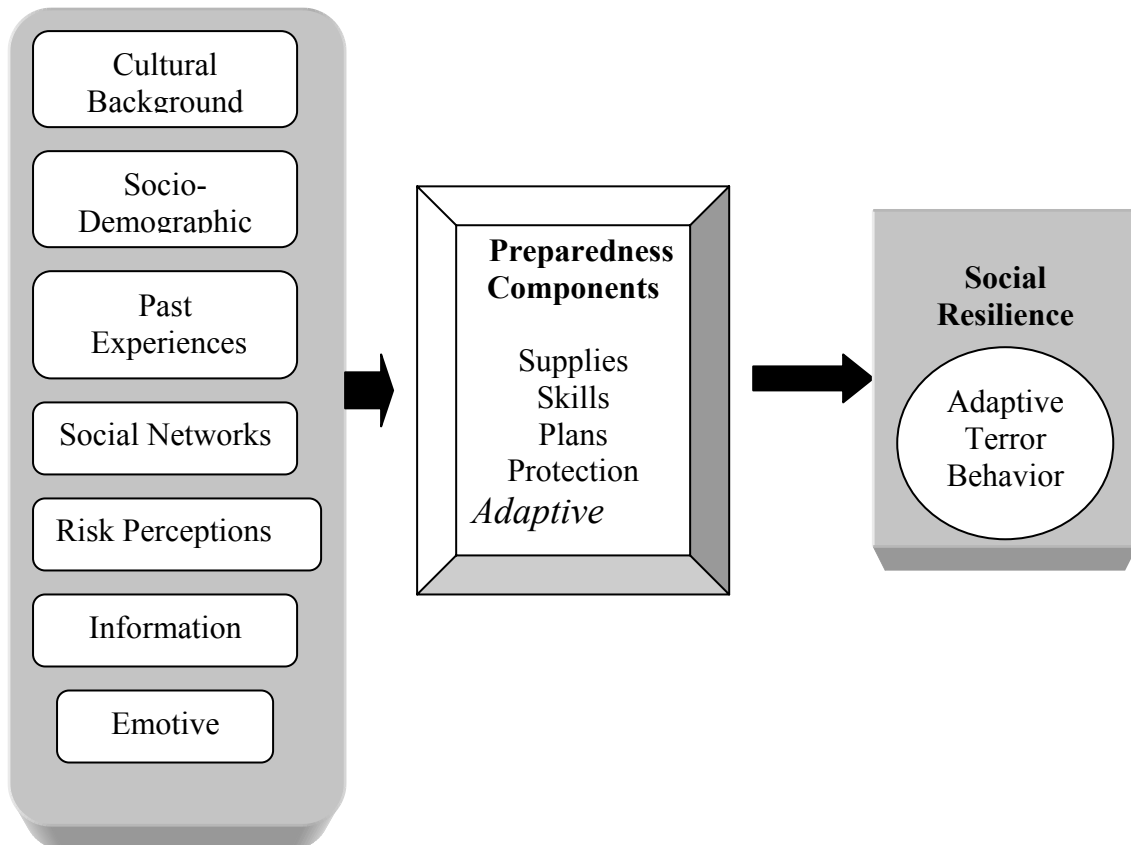


Chart 1:
Distribution of Terror Attacks by Year

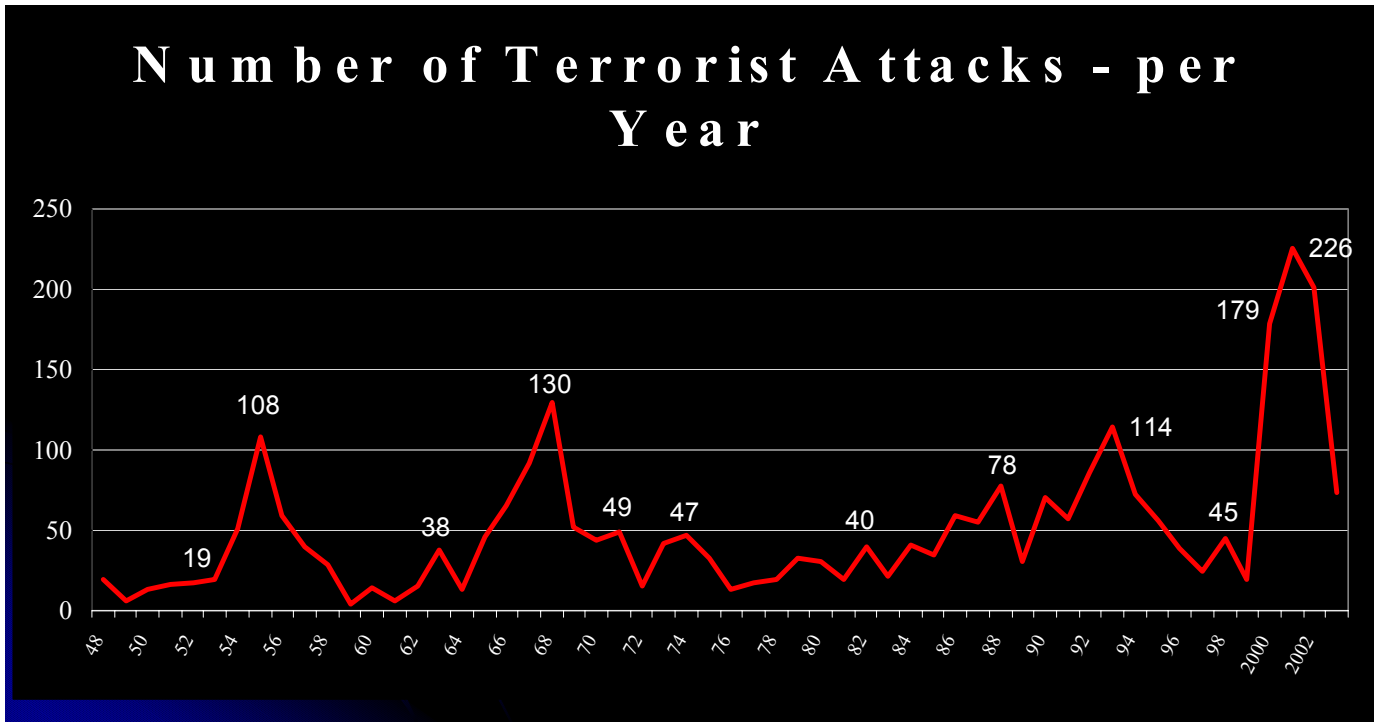


Table 1:
List of Potential Adaptation Behavioral Constructs

Coping With Situation
Avoidance Behaviors
Social Networking Support
Professional Help Sought
Information Seeking
Protective Actions
Religion & Beliefs
Future Oriented Behaviors
Emotional Adjustment
Purchasing Insurance

Table 2:
Behavior Immediate After Terror Assault (N= 799)

Terror Related Behavior	<i>Yes</i>
Present During Assault	12%*
If Involved, Followed Instructions of	
Security forces	48.4
Neighbors, friends	-
Knew what to do	21.1
Passerby	4.2
Information center	-
Rescue personnel	6.3
Mass media	1.1
Local officials	1.1
Myself	10.5
Not relevant	7.4
Total	100.0%
Relations to Victims	
<i>If NOT Involved, Victims</i>	
Family member	28.0
Acquaintance	30.5
Were they Hurt, Killed?	
Family	66.1
Acquaintance	68.6

*Respondents were either injured or not but present and involved in a terror assault.

Table 3:
Proportion of Respondents Who Changed Behavior (N= 799)

<i>Adaptation Variable</i>	Yes
After Terror listen Radio/TV	89%
Make sure family/friends OK	84
Update on security situation	88
Avoid listening to radio/TV	17
Give money to terror victims	52
Avoid crowded public places	41
Have entertainment at home	42
Reduce travel abroad	25
Keep from dangerous places	61
Disguise Jewish origins abroad	38
Only go where Security guards	43
More Aware suspicious people	84
More often call security service	42
Pray more	29
Seek gods help more	35
Go to synagogue/mosque more	13
Got work disability insurance	24
Got Private health insurance	32
Bought Life insurance	34
Got a gun license	9
Joined civil guard	6
I drive a car	69
I feel safer in a car	43
Keep car away from buses	27

<i>Adaptation Variable</i>	Yes
Take tranquilizers more	4%
Sleep more	7
See psychologist more	2
See psychiatrist more	1
See physician more	5
Smoke more cigarettes	9
Drink alcohol more	2
Call hot line	1
Jokes about terror	16
Talk about my feelings	60
Seek emotional help relatives	26
Changed workplace	3
Changed residence	2
Prepared will	8
Prepared funeral/eulogy	2
Purchased burial plot	2
Prepared list of assets	7
Use public transportation	47
If yes, use taxi more	22
Less by bus	27
Choose seat on Empty bus	16
Sit near entrance of bus	18
Sit near driver of bus	15
Sit toward back of bus	13
Travel more by train	14
Avoid peak rush hour	23

Table 4:
 Risk Perception: what are the chances that the following types of events will occur in Israel in the next two years? (N=799)

<i>Disaster Event</i>	High	Medium	Low	Refuse	Total
Suicide bomber	78%	13%	5%	4%	100%
Terror bomb	78	13	6	3	
Missile, Katusha, mortar	66	17	15	3	
Poison water/food	17	34	42	7	
Environmental disaster	24	36	36	5	
Biological weapons	7	23	67	4	
Chemical weapons	7	20	70	3	
Atomic weapons	4	11	83	3	
Terror assault on:					
Entertainment center	72	20	7	2	
Public transport	80	13	5	2	
Airline	18	35	44	3	
Infrastructure (elect)	14	32	49	5	
Household property	8	28	56	8	
Yourself	14	32	38	16	
Family	15	34	36	16	
People don't know	51	28	12	9	
Industrial disaster	14	34	46	7	
Natural disaster	10	31	51	9	

Table 5:
Gender, Educational and Age Differences* by
Basic Terror Adaptive Preparedness Components

<i>Adaptation Variable</i>	Sex	Educ	Age
Listen Radio/TV			
Family/friends OK	***	***	
Update security situation			*
Avoid radio/TV	**	***	*
Money terror victims			**
Avoid crowded places	*	*	
Home entertainment		*	*
Reduce travel abroad		*	
Away dangerous places		**	*
Disguise Jewish origins			
Only if Security guards	***	**	
Aware suspicious people	*		**
Call security service			
Pray more	***	*	
Seek gods help more	***	*	
Go to synagogue/mosque	*	*	*
Disability insurance	***		*
Private health insurance			**
Life insurance			*
Got a gun license	***		*
Joined civil guard	***		*
I drive a car	***	**	*
I feel safer in a car	***		*
Car away from buses	***		

<i>Adaptation Variable</i>	Gender	Educ	Age
Take tranquilizers more	**		*
Sleep more		*	
See psychologist more			*
See psychiatrist more			**
See physician more		**	**
Smoke more cigarettes		*	
Drink alcohol more		**	*
Call hot line		*	*
Jokes about terror			*
Talk about my feelings	**	*	*
Seek emotional help relatives	***		*
Changed workplace			*
Changed residence			*
Prepared will			*
Prepared funeral/eulogy			*
Purchased burial plot			*
Prepared list of assets			*
Use public transportation	**	**	*
If yes, use taxi more			
Less by bus	*		
Choose seat on Empty bus		**	
Sit near entrance of bus		***	
Sit near driver of bus			
Sit toward back of bus			*
Travel more by train			
Avoid peak rush hour			

*Based on Pearson Chi Square coefficients.

* p> 0.000, ** p> 0.05, *** p>0.10

Table 6:
Adaptation Rotated Component Matrix Factor Analysis

	Adaptive Terror Preparedness Components							
	Avoid	Religion	Prof Help	Insure	Seek Info	Future	Coping	Protect
Avoid Crowds	.722	.091	.038	-.038	.046	.089	.060	.011
Entertain At Home	.706	.163	.070	-.097	.013	.101	.133	-.055
Travel Less Outside Guards	.557	.220	-.052	.023	.004	.055	.202	.081
Avoid Danger Places	.504	.200	.193	.001	.145	.018	-.038	.148
Disguise Jewishness	.473	-.040	.003	.208	.067	-.042	-.126	-.108
Neighbor Guards	.318	-.099	.126	.193	.006	.071	-.031	.031
Pray More	-.312	.114	-.035	.196	.061	.143	.210	-.082
Seek G-d	.208	.796	.133	-.075	-.004	-.046	.046	.011
Attend Synagogue	.186	.782	.143	-.079	.027	-.034	.110	-.015
Money To Victims	-.016	.762	.024	.000	-.120	.033	-.041	.113
See Doctor	.003	.445	-.038	.153	.236	.085	.055	-.107
Psychiatrist	.049	.004	.700	-.017	-.006	.020	-.093	-.014
Psychologist	-.046	.032	.678	-.014	-.017	.074	-.055	-.012
Take Drugs	.021	.027	.674	.025	.031	.142	.162	.075
Sleep More	.165	-.038	.469	.059	-.079	-.129	.230	-.077
Call Hot Line	.158	.159	.447	.044	-.117	-.012	.181	.024
Life insurance	.038	.171	.383	-.004	.021	.206	.139	.204
Work disability	.019	-.004	-.008	.757	.042	-.012	-.027	.028
Health Insurance	.068	-.090	.065	.708	.011	-.004	-.052	.030
License gun	-.040	.001	.012	.690	.070	.096	-.012	.086
Threatening	-.265	.039	-.019	.333	-.092	.121	.219	-.190
Keep updated	.184	.175	-.092	.294	.136	-.062	.160	-.065
Inform TV	.055	-.052	-.023	.059	.713	.056	.025	-.120
Avoid Radio/TV	-.010	.081	-.060	.054	.698	-.026	.035	-.001
Concern Family	-.061	.172	.082	.007	-.640	-.039	-.002	-.105
Make Will	.092	.265	.072	.030	.486	-.063	.000	.019
Savings	-.016	.001	.071	.072	-.021	.684	-.049	-.045
Cemetery	.035	.032	.046	.248	-.030	.681	.131	-.114
Eulogy	.050	-.018	.121	-.097	.063	.583	-.018	-.004
Alcohol	.092	.008	-.066	-.039	-.017	.575	.081	.299
Cigarettes	-.045	-.059	-.009	-.037	-.045	-.026	.672	.083
Jokes	.087	-.065	.261	-.088	.042	.111	.537	.011
Feelings Security	-.138	.091	.087	.019	.000	.104	.456	.056
Support Friends	.242	.077	-.006	.097	.178	-.086	.408	-.036
Call Security	.273	.129	.242	-.058	-.015	-.106	.327	.057
Change Work	.096	.195	.031	.254	.011	.032	.295	.036
Move Home	.090	-.002	-.048	.016	-.031	-.007	.175	.786
	-.022	.021	.123	.078	.010	.028	-.024	.748
Eigenvalues	3.908	2.331	2.256	1.786	1.585	1.519	1.495	1.321
% of Variance	6.476	6.466	6.005	5.519	4.846	4.814	4.554	3.952
Cumulative %	6.47	12.94	18.94	24.46	29.31	34.12	38.68	42.63

Rotation Sums of Squared Loadings % of Variance Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 8 iterations. Used recoded variables eliminating "don't know" and making missing into mean.

Table 7:
 Percentage Distribution of Eigenvalue Coefficients into Weighted
 Categories By Adaptation Components* to Terror

<i>Component</i>	<i>Degree of Adaptation to Terror</i>			
	(-) Least	(-) Moderate	Moderate (+)	Greatest (+)
Avoidance	2.5	47.9	43.5	6.1
Professional Help	1.3	32.8	65.8	0.1
Protective Behavior	2.6	48.0	48.9	0.5
Insurance Policy	7.0	43.4	48.6	1.0
Religious Support	9.6	33.9	54.5	1.5
Future Plans	0.4	40.4	58.6	0.6
Media Information	12.5	55.1	30.5	1.9
Coping Behaviors	1.5	50.8	45.4	2.3

*The weights of each specific component were based on a equal four-way division of the specific range of the eigenvalues for each component.

Between Social Resilience and Social Capital

Dr Karin Amit, Nicole Fleischer

Introduction

Social resilience is a broad concept that encompasses various aspects of social / communal sustainability. While the concept is repeatedly used and assessed by the public, by the media and with the aid of periodic opinion surveys (such as the Social Survey, 2002 by the National Bureau of Statistics), the concept of social resilience clearly lacks a consensual theoretical definition. In this paper, we attempt to delve into a theoretical conceptualization of *social resilience*, and methods for measuring this concept will be suggested. In light of the concept's complexity, we wish to focus on the aspect of social interactions within a society or community. To this end, we will adopt a theoretical concept, widely accepted in the sociological literature, id est *social capital*. Social capital is defined as the entirety of characteristics pertaining to a society such as trust, social norms and social networks, which facilitate cooperation and coordination for mutual benefit (Putnam, 1995). Based on studies examining issues relating to social capital and its ramifications on the community and its individuals, we assert that the existing social capital within the community is an essential stratum of its resilience.

In order to prove this claim, we will proceed gradually. First, we will review the existing literature on social resilience and the methods for measuring this concept in Israel and abroad. The review will highlight aspects pertaining to social relationships within the community. Secondly, we will present the concept of social capital and discuss the link between this concept and social resilience, whilst attempting to locate empirical

research dealing with both concepts. Finally, we will present possible ways to assess social resilience by means of measuring social capital.

1. Social Resilience – Review

The concept of *national resilience* is a broad concept that addresses the issue of the society's sustainability and its strength in several diverse realms. These realms can be roughly divided into an economic realm and a psycho-sociological one. The economic realm in this case, refers to the economy's financial status, to its foundations, to its natural and technological resources and to its human resources (Sadan, 2002). The significance of these economic foundations in delineating the economy's financial status and in determining its resilience is lucid and apparent. These components can be examined directly, in a straightforward fashion (e.g. the Melnick index, which measures the state of the economy, Melnick, 2002). It is not as clear how socio-psychological aspects of society's resilience ought to be measured. One may take a broad view and state that the psychosocial realm refers to aspects related to the consciousness and behaviors of the individual within a society. In this paper, we will address the psycho-sociological aspect of the concept of national resilience, that is - the concept of social resilience.

The concept of social resilience lacks a consensual theoretical conceptualization. The debate over this concept centers primarily on locating variables and components associated with it, as well as on defining them. Definitions for the social component of national resilience can be extracted essentially from different studies which monitor the state of the society in Israel (e.g. Ben-Dor, Pedhazur and Canetti-Nissim, 2002, 2004; Gal, 2003; Melnick, 2004). These studies, along with periodic indices for social stance topics such as democracy indices (Arian, Ben-Nun and Barnea, 2004), embrace issues linked to the society's social resilience, yet they focus on measuring the various components, and are less concerned with developing the theory of the concept and with obtaining a profound understanding of it. The literature, therefore, conspicuously lacks a theoretic, research-driven discourse on the concept of social resilience, its origins, components and consequences.

Thus, what is social resilience? There are several possible definitions for the concept, based on various bodies of knowledge. In a study conducted by the Israeli National Security Council (NSC) (NSC, 2003), which examined Israeli society during the el-Aksa Intifada period, the term national social resilience was defined as the society's resilience in the face of continuous hardship. The psychological term- *resilience*, and the closely-related psychological term *hardiness*, derive from theories that deal with the individual encountering stress, and with its capability to cope with stressful situations (Haggerty, 1996; Kobasa, 1979). Individuals, who are characterized by high hardiness and notable resilience, have a prominent sense of self-control, along a belief in their ability to successfully respond to and cope with stressful situations (Kobasa, Maddi & Kahn, 1982). The concept of resilience also applies for groups, for instance in studies examining the resilience of the family (McCubbin & McCubbin, 1988; McCubbin, McCubbin, Thompson; Han & Allen, 1997; Cohen, Slonim, Finzi & Leichtentritt, 2002). Nonetheless, apart from the psychological use of the term *resilience*, this concept also appears in the literature in cultural contexts (cultural resilience) regarding the conservation of ethnic minority identities (Rorlich, 1986). Furthermore, the literature also addresses resilience in a socio-ecological context (*socio-ecological resilience*). In this case, the concept refers to the ability of the social and environmental systems to handle environmental changes and crises (see for example, Beker, Colding & Folke, 2003).

The Israeli National Security Council defines social resilience as society's sustainability. It stems from a psychological perception and concentrates on the individuals' capability to manage situations of relentless tension and distress. This definition (NSC, 2003) includes a *conscious* component relating to the individual's feelings and emotions, and a *behavioral* component relating to the actual behavior of the individuals in various spheres of life, with emphasis on their ability to cope and adapt. This definition implies an empiric study of the concept of social resilience by using conscious and behavioral parameters such as levels of morale and mental state of the individuals, the social cohesiveness, the sense of commitment and faith, as well as the individual's daily conduct and its behavioral manifestations (such as expressions of distress, criminal episodes, spending habits and so forth). The data gathered about these conscious and behavioral components of social resilience was matched up

against data of terror attacks over the first three years of the El-Aqsa Intifada (NSC, 2003). The conscious component was assessed through a survey of the Israeli public, at different times. Within the survey, respondents were asked to supply an optimistic/ pessimistic evaluation of their personal situation, describe their personal mood, feelings about personal security, feelings of involvement and commitment to the state of Israel, faith in the government authorities as well as their personal estimate of the condition that prevails in the state of Israel. In this research, the behavioral component was examined through three indicators: the extent of calls for help (such as E.R.A.N help-line), consumer behavior (such as going to the movies, going on vacations) and various crime episodes (such as murder and domestic violence). The research findings show a general picture in which the public's behavior is rather stable. The public responds to threatening situations, but instantly reverses to daily routine. As regards the public's perception, it was found that a significant percentage of the research subjects claimed to have been coping well with the situation. A majority of the subjects maintained that they wish to remain living in Israel, albeit they estimated the general condition of the state to be less than agreeable. Furthermore, it was found that most of the subjects deemed that their personal situation was fair, and were more anxious about problems of livelihood than about the security situation.

This psychological view of social resilience is criticized primarily since it focuses on the individual's manner of managing situations of war and security conflicts. Thus, for example, Prof. Dudai asserts that social resilience is essential in times of conflict, but is also a vital component in times of peace (Arad, 2001 p. 290). He alleges that on account of the security orientation of Israel's leadership through the years, the reluctance to confront the implications of the prevailing schisms in the Israeli society, as well as the desire to present immediate results, the few studies conducted have focused on resilience with respect to national security and much less with respect to society and education (ibid, p. 291). A scrutinizing sociological perspective at the social consequences of the excessive significance placed on security in the Israeli being, can be found in the book by El-Haj and Ben Eliezer (2003). Placing the security ethos at the core of the collective consciousness excludes national minority groups as well as women from the hub of social productiveness. The

authors argue that the transformations occurring in Israel over the past few years call for a different view of the military-society relationship. These criticisms invite a more sociologically oriented view of social resilience.

Emile Durkheim (1964), who is considered one of the forefathers of sociology, dealt with the issues of modern society's strength and its supremacy over the individual. In his work, he presented a predominant variable for comprehending the society's resilience, that is, the social cohesiveness of the members within a society. This cohesiveness is affected by the society's collective consciousness (shared beliefs and feelings) and readiness to make concessions for the benefit of the society. In addition, Durkheim stated that societies in which members' characteristics are more homogeneous, have a higher level of collective consciousness. This outlook may lead to a definition of social resilience as **the readiness of the individuals within the society to waiver personal interests for the benefit of the collective interests**. The main reasons that account for this individual's readiness are twofold. First, the collective is in distress and, therefore, yielding to personal interests might prevent harming the collective, and thereby the individual. Second, the individual is driven by a sense of commitment and belonging to the collective. This definition associates the individual with the group via sense of commitment and belonging. We can presume, based on this definition, that societies and communities, in which the individuals have a strong sense of commitment and belonging, will also have a high level of social resilience. Hatcher (1987) discusses the principles of group solidarity and opens discussion of the possible discrepancies between personal interests and collective interests. He contends that in order to ensure the collective interests, the group might proceed in two routes: in the first one, **it** would compensate the group members and in the second one, **it** would create commitment to the group and hence solidarity. This commitment to the group increases as the members' dependence on the group grows and as long as there are personal relationships between the members.

The terms *commitment* and *solidarity* are essential variables when discussing the concept of social resilience. Dudai (in Arad, 2001) suggests that the main components of social resilience are belief in a common goal, bonding myths and a collective memory. These elements are represented by a collection of society's shared stories, symbols, beliefs and customs, which are passed down from generation to generation while being adapted

to the changing reality. Bar-Tal and Yacobson (1998) also mention collective memory in their study, as one of the factors affecting the sense of security of the individuals in the Israeli society.

The sociological definitions open the discussion of collectivism as a means of enhancing society's resilience, even at the cost of giving up individual interests. However, upon discussion of the resilience of a society, especially as heterogeneous as the Israeli society, the following questions arise: Is there significance in the survival of the society at any cost, or perhaps there is significance in the nature of society as a democratic society? Should social resilience of various groups within the Israeli society be examined separately (for example Jews/Arabs; religious/secular groups) or should resilience be examined for the entire Israeli population? In this paper, we wish to refer to the social resilience of the entire population including all various groups, and to discuss social resilience not as the survival of the society at any cost, but rather as a force that preserves society's democratic nature, and thereby protects the rights of the different individuals within the society.

Evaluation surveys conducted up until now, explicitly or implicitly examining the concept of social resilience from a sociological aspect, have examined the individual's commitment by means of parameters such as readiness to remain in Israel or to emigrate, the extent of trust in government authorities and so forth (Elkis, 2004; Arian, Ben-Nun & Barnea, 2004; Ben-Dor, Pedhazur & Canetti-Nissim, 2002).

Ben-Dor et al (2002, 2004) examined social resilience as consisting of four core components: fear of terror, militancy, patriotism and trust in government authorities. These four components were examined in a series of studies conducted during the first four years of the el-Aksa Intifada. Their findings indicate a certain increase in fear of terror and militancy among the general Jewish public, alongside a moderate decrease in fear of terror among the Israeli minority groups (Muslims, Christians and Druze). Since 2002, patriotism among the Jewish population has been declining, but this trend ended and a slight increase began in 2004. Among minority groups in Israel, a moderate decline in patriotism has continued since 2000. An examination of the public's trust in government authorities indicates that generally there is a moderate and consistent decline in the general Israeli public's trust in the political and judicial authorities, along

with a high level of trust in the defense authority among the Jewish population. The researchers agree that even though terror did succeed to affect the public's anxiety level at certain times, the chief parameters of social resilience have remained stable all along. This evaluation survey, as well as other social evaluation studies previously mentioned, is based on periodic opinion surveys. Hence, here the concept of social resilience is as perceived by the individuals. In other words - on the *micro* level.

Parallel to evaluation surveys examining social resilience through the opinions of individuals, one may find evaluation surveys examining the social resilience phenomenon on the *macro* social level, and from a more socio-economic perspective. Melnick (2004) offers a list of ten socio-economic indicators for examining national social resilience, which are internationally comparable. This list includes scales examining poverty, inequality, education, chronic unemployment, health, rate of male and female participation in the labor force, standard of living, percentage of elderly population (over 65) and young population (under 15). These indicators have been examined in relation to OECD countries and countries in the region, while monitoring changes over time, whereby the countries at the top-end of the social scale are countries in which there are low rates of poverty, inequality, chronic unemployment, and elderly and young populations, aside high rates of education, health, participation in labor force and quality of life. The examination findings of these indicators in Israel suggest a decline in the position of Israeli society on this social scale since 1996 and a growth in the gap between Israel and advanced countries. It should be noted that Prof. Melnick examined these social resilience parameters as part of a broader study of national resilience, which is concerned with the economic, political and security aspects.

While we presented evaluation surveys on the micro and macro levels dealing directly with the concept of social resilience, evaluation surveys have been conducted in Israel dealing with this concept implicitly by examining the state of democracy in Israel (Arian, Ben Nun & Barnea, 2004). The Israel Democracy Institute monitors various democracy-related indicators in the Israeli society by means of the Israel Democracy Index. This index examines three aspects: the institutional aspect (for example political involvement and government integrity), aspect of rights (such as income inequality rate, gender equality and minority group

equality) and the aspect of stability and cohesiveness (e.g. protest and objection, social schism) (Arian, Ben-Nun & Barnea, 2004). The researchers added to this index an opinion survey regarding democracy that examined the public's perception of the three aspects above-mentioned. This research provides the current state of democracy in Israel at a given time, by examining macro-social indices (such as inequality) and by examining indices on the individual level (public opinion). However, it is evident from our review thus far that this information alone cannot provide a comprehensive picture of social resilience in Israel, which includes other social and psychological aspects as mentioned earlier.

The concept of national resilience in general and social resilience in particular is scarcely dealt with internationally. Discourse on this subject can be found mainly in developing countries (Rahman, 2001; Emmerson, 1996). The issue of national security in South Asian countries, especially in India and Pakistan, is discussed by Rahman (Rahman, 2001), who maintains that there are two alternative paradigms for national security. The first is the economic paradigm, according to which a society's strength is in its economic power. The second is the developmental paradigm, according to which the status of individuals regarding basic rights (food, education, voting and being elected) within the society has to be the core. While the economic paradigm deals with security on the macro level, the developmental paradigm delves into the micro level and deals with individuals and groups. In this publication, the concept of social capital is mentioned as relevant to understanding the society's resilience. This context will be elaborated further on.

As mentioned earlier, the subject of social resilience is discussed in international academic literature on ecology (Bekers, Colding & Folke, 2003). This literature presents the resilience of various social systems (institutions, organizations and economic systems) to environmental changes and examines the survivability of these systems on the macro level. Social-environmental resilience is defined as the magnitude of environmental disturbances that the society can absorb prior to change in its basic structure and goals (Gunderson, 2003). Institutions, norms and regulations required to organize the activities of the society constitute the basic structure of society. This definition, similarly to psychological

definitions, focuses on crises, but in contrast, it highlights the society-wide side rather than the individual one.

1.1 Social Resilience – Definition

In light of the studies that we have reviewed, it is possible to conceptually and empirically examine the concept of social resilience on two levels: the dimension of the individual (micro) and the dimension of the society (macro). Accordingly, each definition requires separate empiric methods of examination.

1.1.1 Social Resilience –Definition of the Micro Level

We may try to associate the psychological definition previously proposed for social resilience with the sociological one. We may do so while bearing in mind the argument we have raised concerning shifting away from the emphasis on national security and limiting the collectivism to levels where basic individual's rights are protected. The definition we propose represents the general resilience of the individuals within the society and according to which social resilience is defined as the **extent of commitment and ability of the individuals within the society to act on behalf of mutual social interests, while protecting the rights of the individuals within their society; as well as the extent of their ability to cope with various stressful situations.**

This definition has psychological and sociological aspects. Whereas the first part of the definition is concerned with the individual's resilience and coping with various intra-social stressful situations and extra-social ones (not necessarily security distresses), the second part is concerned with the individual's sense of social commitment and motivation to contribute to the society while protecting the rights of the individual. This definition deals with the concept of social resilience on the micro level, that is, the performance of the individual within the society. Consequently, the assessment of it will be measurements of attitudes and behavior.

1.1.2. Social Resilience – Definition of the macro Level

Proceeding Melnick's (2002; 2004) studies and the ecological and social studies that we have presented, we may consolidate a definition to social resilience on the macro level. Hence, social resilience is represented by **the level of the society's general performance in the public sphere, which is expressed in the area of education, welfare, democracy and government, as well as in the society's ability to cope with internal schisms and conflicts while protecting its basic structure and goals.** This level of performance is expressed in the various characteristics of education, welfare, democracy and government and the empirical measurement could be achieved by collecting data relating to different social indicators in the fields of education, welfare, democracy and government, as well as data relating to the conflicts and schisms within the society.

1.2 Social Resilience – Possible sources

Hence, from this review we may summarize that social resilience reflects, on the individual level, a circumspective range of psychological and motivational abilities of individuals within the society, enabling them to successfully cope with various situations, and it is expressed in their desire to develop and contribute to their society. By and large, social resilience reflects the general performance of the society, which can be expressed in its ability to protect its structures and goals even upon facing changes and crises.

Considering these definitions, the following questions emerge: what are the sources of social resilience? Thus, is it possible to influence social resilience? If so, in what ways? The meager literature available, as previously mentioned, lacks an explicit discussion on this issue. The research literature in this realm is largely theoretical. The findings of the research depict an existing situation, relevant for the specific time when the data was collected, whereas these researches are tracking changes in the long run in an attempt to examine social resilience changes or various parameters linked to social resilience. If we adhere to the concept of social resilience at the micro level, it is obvious that in order for individuals to successfully cope with various social crises and act at will for the sake of

interests common to the entire society – they have to feel commitment to and solidarity with the collective and its goals, they have to have faith in the leadership and in the government authorities. The society's general conduct and performance in the public sphere could have repercussions on this commitment. Individuals ought to feel fairness towards their engagement as well as to feel equality in their share of the social burden they bear. Thence, social resilience on the macro level could have consequences on the resilience on the individual level. However, there still remains the question of what enhances this sense of commitment. What is it based on?

According to a finding stemming from the Israeli National Security Council report (NSC, 2003), individuals in Israel draw their most resilience from their family and their close environment. This may indicate a central role of the individual's social relationships in the psycho-sociological management. Studies on the individual level, which examined the individual's resilience in stressful situations, indicate that apart from the personality-oriented resilience, the individual's social support has a moderating affect on anxiety and depression (Pengilly & Dowd, 2000). A study, which examined the issue of resilience on the family level (McCubbin et al, 1997), indicates several main sources for the resilience of the family unit: a sense of commitment to the family, flexibility and adaptability to changes, reliability expressed by conveying sincere information, social support expressed by close relationships between family members and finally, spiritualism and hope. The researchers mention social support as a key factor in a family's resilience (McCubbin et al, 1997). In addition, Israeli society (Jewish and Arab) as opposed to most western countries, maintains the importance of the family and it still occupies a central position in the individual's life (Herzog, 2003). By the same token, bearing in mind that the above mentioned was examined on the individual or family level, we wish to focus on comprehending the contribution of social relationships to social resilience. For this end, we will introduce a central theoretic concept well-known in the sociological literature – social capital. We should like to utilize this concept so as to elucidate the concept of social resilience, theoretically and empirically.

2. Social Capital – Review

The concept of social capital was coined by the French sociologist, Pierre Bourdieu (Bourdieu, 1986) and is defined as the total resources, feasible or potential, that an individual or a group accumulates by means of constant maintenance of social networks or reciprocal social interactions. It follows that social capital is a resource associated with frequent social interactions conducted by the individual or the group and is based on mutual commitment. By social capital, individuals are able to easily attain financial and cultural resources. A few years following Bourdieu, Coleman (1988) dealt with the concept of social capital and delved into the issue of individual's role as part of human capital and with its consequences on the outcome of education and learning. According to him, this concept is complex and consists of a series of entities, which have two common characteristics: they are all made up of some aspect linked to social structure and they facilitate certain actions of individuals within this structure. Portes (1998), who also examined social capital from the point of view of the individual, maintains that social capital is in fact the individuals' ability to ensure benefits for themselves by belonging to organizations and social networks.

A core definition, which is accepted today by many researchers in this realm, and which raises the level of the discussion to the social macro level, is Putnam's definition (Putnam, 1995). According to Putnam, social capital is a complex of organizational-social characteristics such as faith, social norms and social networks that ameliorates and utilizes the performance of the organization or community by enabling cooperation and coordination for mutual benefits. According to Putnam (1993), the presence or absence of social capital could affect the financial prosperity of the society. He proves this claim in a comparison between northern and southern Italy. This claim reinforces our assumption that a society or community's social resilience is associated with the social capital of its individuals.

Furthermore, Putnam (2000) presents a unique distinction between bonding social capital and bridging social capital. As the former represents close relationships within a homogeneous community while expanding the dissociation from the external community, the latter represents close relationships with a heterogeneous population while

attempting to associate and bridge between groups of people. Putnam (2000) claims that these two types of social capital can be found in various social institutes: the bonding social capital can be found in organizations such as ethnic/religious organizations and in exclusive clubs, while bridging social capital can be found in organizations such as human rights movements and civil service programs. Szreter (2002) suggests to include another type of social capital under the bridging social capital concept: the associating social capital that exists when the groups realize that not only are they different, but they do not have equal strength and accessibility to resources. This distinction between bridging and bonding social capital raises the possibility that the presence of social capital does not necessarily promote the benefit of the entire public. From the overall social aspect, we can assume that bridging social capital will contribute to strengthening the social resilience of a heterogeneous society, while bonding social capital, which creates and maintains differences between groups, could even diminish social resilience. We will attempt to develop this thesis as this paper unfolds.

While the literature presents increasing acceptance regarding the general definition of social capital and its dimensions, there are many interpretations on the operational level to what should or should not be included when attempting to measure it. I.e. there is not one single accepted measuring tool for social capital (Narayan & Cassidy, 2001). Rather, there are several initial attempts to develop reliable measuring tools (Narayan & Cassidy, 2001; Pavin, 2003; Talmud & Mesh, 2003). In their article, Narayan & Cassidy (2001) review the various tools available for examining social capital. There are varied and diverse tools; nonetheless, there are two concepts that are repeated in the various studies: trust and membership in organizations/social groups. These two researchers developed a questionnaire known as the GSCS - Global Social Capital Survey - for examining social capital. The questionnaire is divided into 14 categories of questions embracing various subjects: group characteristics, general norms, feeling of togetherness, sociability (in daily living), neighborhood relations, volunteerism, trust, pride and identity, communication, quality of government, sincerity and corruption, peace, crime and safety, and finally political involvement.

Their survey, which was piloted in Ghana and Uganda, used this questionnaire. An examination of the questionnaire properties reveals a

great deal of resemblance with the indicators for measuring social resilience proposed in the literature. Therefore, we will further on recommend relying on this questionnaire for examining social capital and social resilience, while adapting and contextualizing it to the Israeli society.

3. Between Social Resilience and Social Capital

From the above review of both concepts, social resilience and social capital, we can point on several overlapping features. Firstly, both concepts call for classification discerning between the micro and the macro levels. Similar to social resilience, which can be seen from the individual point of view or through social indicators, social capital is also approached on two levels. While researchers such as Coleman (1988) and Portes (1998) examine social capital as another resource of the individual in addition to the individual's financial and human capital, researchers such as Putnam (1995; 2000) discuss this concept in relation to communities and societies.

Another overlapping feature relates to the components of both concepts. The presence of the trust component is evident in both concepts as being central to their definition. As has been shown, social resilience is examined in many evaluation studies by means of the individuals' trust in the various public institutions. The individuals' trust level is a condition for their readiness to engage themselves for the benefit of the whole society, and thus it is a significant component in society's resilience. A community or society's social capital is based on the trust in social relationships between individuals, between groups and between the individual and the society's institutes. The significance of trust in society is also discussed in Fukuyama's (1995) work. He proposes that when examining and comparing financial prosperity of various societies it is necessary to mind the trust component, which is a cultural component. A comparison he conducted between the Japanese and the Chinese societies suggests that while the Japanese society overwhelmingly trusts the authorities, the Chinese society is characterized by a low level of trust towards them. This cultural component has consequences on the performance of the various societies. The Japanese are more socially

involved and prepared to engage for the benefit of the society, and financial processes occur rapidly without bureaucracy and suspicion. The Chinese, conversely, feel more committed to the family unit and their social involvement is very low. Fukuyama even uses this comparison for the bridging and bonding social capital concepts. The Japanese society, therefore, has a higher level of bridging social capital than the Chinese society, which has a relatively high level of bonding social capital.

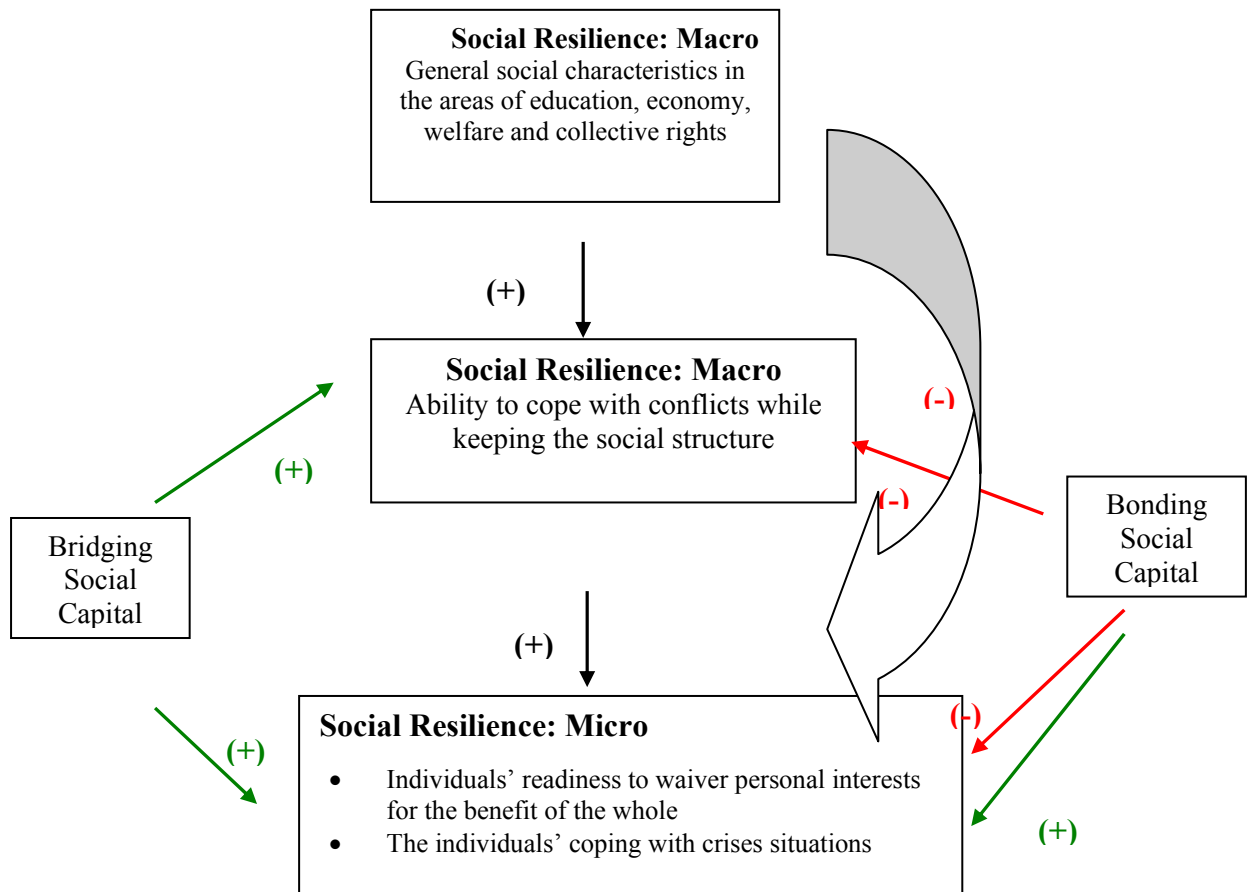
The similarity between these two concepts, social resilience and social capital, advances several questions regarding the link between them. Firstly, are these concepts different? Does social capital explain social resilience or visa versa? Perhaps there is no direct link between the two concepts? These questions and others were discussed on a round table conducted by the Carmel Institute in July 2004, with the participations of scholars who deal with these concepts explicitly or implicitly. This discussion led to the participants' agreement that despite the overlap between these two concepts, social capital and social resilience, they are two separate concepts. However, they did not agree upon the nature of the link between these two concepts. A few suggestions were made regarding the link between the variables: According to the first suggestion, made by Reuven Gal, social capital is a variable that mediates between the above mentioned definition of social resilience at the individual level (micro) and social activism. Hence, social involvement of individuals in the society (participation in demonstrations, volunteerism, etc.), which strengthens its resilience, depends on the social capital of the individuals belonging to the society. The second suggestion, made by Avraham Pavin, states that social capital explains social resilience, that is, it explains the individual's responses when coping with crises. Communities with high levels of social capital cope better with crises. According to the third suggestion, made by Nohad Ali, social capital is a broad universal concept that accommodates the concept of social resilience. He further asserts that the type of social capital, bridging or bonding, is essential in order to resolve the relations between social capital and social resilience. Other issues introduced during the discussion around the round table, concerned the levels of measurement, whether at the micro or at the macro level.

In light of our review, it is clear to us that there is a significant link between social capital and social resilience. However, in order to understand the complexity of the relationship between the concepts, one

must take into account the type of social capital acquired, be it bridging or bonding, and the resilience level to be considered, be it micro or macro. The individuals' social capital is expressed by the quantity and quality of the social relationships they maintain. If this social capital is bonding, namely it is restricted to a limited and distinct group within the society, it may contribute to the resilience of the individuals in the group, but may not contribute (or may even undermine) their willingness to harness for the benefit of the entire society. Here, social resilience is defined on the micro level, in other words, the resilience of the individuals during crises aside their readiness to contribute to the society. A society made up of distinct groups with intensive social interactions within the group, but not outside of it, will be characterized by low social resilience. The individuals in such a society will not easily harness themselves for the benefit of the entire society, and the society may face difficulties coping with incessant crises. The link between the concepts along these lines appears in Rahman's (2001) work, which examines the social resilience of South Asian countries. He asseverates that a country with a multitude of groups without significant social interaction between them will be more vulnerable in times of crises, and will be less resilient to social ills such as crime, inequality, etc. Contrary to this, if the social capital of the individuals is a bridging one, i.e. there is social interaction between the various groups within the society, it may contribute to the social resilience of the society. A society, in which there is significant social interaction between individuals regardless of their origin, status, or group affiliation, will be more resilient in ongoing crises. The individuals in this society will be willing to harness themselves for the benefit of the entire society and will be interested in preserving the rights of all individuals within the society. From this analysis, we can deduce that bridging social capital will contribute to social resilience, as it is defined on the micro level.

So, what about social resilience on the macro level? As previously mentioned, social resilience on the macro level is defined as the extent of the society's ability to cope with internal schisms and conflicts while preserving its basic structure and goals. This resilience is expressed by the characteristics of the society in the fields of education, welfare, economy, the collective rights of sub-groups and the type of government. Could the social capital of individuals in this case also contribute to the various levels of social resilience? We deem that bridging social capital will

contribute to a better social management of the society's internal schisms and conflicts. However, we could look at the more general characteristics of the society in education, economy, welfare, the government and collective rights as independent variables, which could affect social resilience on the micro level, i.e. the resilience of the individuals in crises situations and their readiness to waive their personal interests for the benefit of the whole society interests. As we have mentioned, in order for individuals to be willing to harness themselves to activities for the collective, they must have faith in the government authorities, feel that society's burden is fairly distributed, feel that they have equal rights as individuals and as groups within the society and have a sense of belonging. Thereby, we may conjure-up a set of variables in which the type of social capital of individuals on the one hand, and the macro level of social resilience on the other hand, are the variables explaining social resilience on the micro level. In this proposed model, there could be reciprocal associations between the variables. From the following diagram, it is evident that bonding social capital can contribute to the social resilience dimension on the micro level, which is expressed by the individuals coping with stressful situations, yet can mar the second dimension of this social resilience - the individual's readiness to waive personal interests for the benefit of the society. Bridging social capital could have positive effects on the various resilience dimensions on the micro level and on the dimension of coping with conflicts on the macro level. Macro-level social resilience could have positive effects on social resilience in the micro level.



The diagram above summarizes the relationships between the variables. We can conclude that a high level of social resilience will be achieved in a society in which the individuals have high levels of bridging social capital and positive general social characteristics.

From our review, we find that there is a range of tools and indicators for examining social resilience and social capital. In order to measure these concepts, we first decided to lay out the various available tools in use. The following tables describe a few selected indicators for social resilience at the micro dimension as well as tools for measuring social capital. The continuance to the proposed model described in this paper, is to select indicators for each level of social resilience and social capital, and to explore them through experimentations followed along with systematic research and evaluation.

Table 1: Selected Indicators for examining social resilience on the micro level:

<i>Components</i>	Type of Variable	Central indicators / variables	Optional Bibliographic source
Individuals coping with crises situations	Behavioral indicators of distress, crime and consumption	Calls to crisis help line Visits to the cinema Visits to hotels Trips abroad Robbery/murder Domestic violence Sexual violence Road accidents	National Security Council, 2003
	Personal opinion	Evaluation of personal situation (optimism) Personal mood Feelings of personal security	National Security Council, 2003
	Adaptive behavior	Opinions regarding terror Adaptive behavior due to terror	Kirshenbaum, 2005
	Personal opinions	The right to work The right for reasonable residence The right for reasonable education The right for reasonable medical treatment The right for reasonable living conditions (food) Honorable livelihood Trust in the social guarantees	Elkis et al, 2004
The readiness of individuals to waiver personal interests for the benefit of the whole	Social opinions	Social commitment Willingness to volunteer for the community Willingness to remain in Israel Willingness to enlist the IDF (for the relative sectors) Willingness to volunteer for national service (for relevant sectors) Social involvement Trust in the government authorities Trust in leadership	Ben-Dor et al, 2004 Elkis et al, 2004
	Opinions regarding the authorities and democracy	Trust in the state authorities Fear of terror Militancy Patriotism Satisfaction with the democracy Patriotism and identification Support in equal rights Trust in the authorities Inter-group relationships Extent of interest in politics Extent of involvement in politics	Arian et al, 2004 Samuha, 2004

Table 2: Selected indicators for examining social capital on the macro level

<i>Components</i>	Type of Variable	Central indicators / variables	Bibliographic source
General Characteristics	Economic/social indicators (internationally comparable)	Poverty Inequality Education Rate of chronic unemployment Health Percentage of women in labor force Percentage of men in labor force Standard of living Percentage of population over 65 Percentage of population under 15	Melnick, 2004
	Institutional indicators and stability	Responsibility of authorities Representation Braking balance Political participation Governmental integrity Indicators of corruption	Arian et al, 2004
	Social indicators	Status of collective rights Extent of awareness and overlapping between collective memory of sub-groups Tolerance indices Racism indices Political rights Civil rights Social rights (inequality) Economic rights Gender equality Equality for minorities	Bar-On & Adwan, 2003
	Governmental/stability indicators	Governmental stability Protest and objection Social schisms	Arian et al, 2004

Table 3: Selected tools for examining the type of social capital:

Level	Measurement Tools	Central indicators / variables	Bibliographic source
Micro	GSCS questionnaire	Group characteristics General norms Togetherness Everyday sociability neighborhood relations volunteerism Trust Pride and identity Communication Quality of government Sincerity and corruption Peace Crime and security Political involvement	Narayan & Cassidy, 2001
	SCBS Social Capital Benchmark Survey	Social networks structure Quality of social networks Variation of social networks (race, origin, religion)	Aguilera, 2002
	Kibbutz Opinions Survey	Attitudes towards others Trust in various groups in the region Willingness for pro-society activity Perception of the community status Scope of social relationships Perception of the kibbutz establishment (democracy) Perception of the gaps between the kibbutz members	Pavin, 2003
Macro	Qualitative Analysis	Distinction between bridging and bonding social capital by means of qualitative analysis of social networks in Italy (the South as opposed to the North)	Putnam, 1993

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