

Assessment of Methods to Quantify Neediness Among Jewish Nazi Victims

IN RE: HOLOCAUST VICTIM ASSETS LITIGATION

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Chief Judge, Eastern District of New York

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AMONG JEWISH NAZI VICTIMS**

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I. INTRODUCTION

This report was developed in response to a request of the Court and is designed to aid in assessing proposals for distributing any funds available under the Swiss Banks Settlement that cannot be returned to members of the Deposited Assets Class.¹ Our focus is on methods used to describe and quantify neediness among Jewish Nazi victims. In a proposal advocated by the World Jewish Restitution Organization (WJRO) and the State of Israel,² Professor Sergio DellaPergola has developed a country-specific index of Nazi victim neediness. It is proposed that this index of neediness would be used along with estimates of victim populations to calculate a suggested allocation of resources to countries where victims live.³ The present review assesses the conceptual foundation of this index and considers its use as part of an allocation formula. Necessarily, the present assessment includes a review of the demographic data that are central to the estimation of the proposed allocations, as well as an examination of the details of the neediness index itself. The report concludes with a discussion of the difficulty of developing algorithmic answers, based on macro-level data, about neediness and using such information as a proxy for information about the individual needs of victims.

As with our prior analysis of needs,⁴ the present goal is to describe the facts and analytic issues as fully as possible and with balance. No judgment is made about how any excess funds should be allocated. Where necessary, we indicate the limitations of our analyses and the degree to which one can have confidence in our conclusions. Knowledge of the needs of individual elderly victims is incomplete – on that issue, there is widespread agreement – and making allocation decisions based on available data is complex. Particularly for the purpose of comparing victim needs across countries, macro-level indicators need to be used as an adjunct to limited micro-level data. The assumptions made about using these indicators, as well as the nature and quality of data that are available to construct a neediness index, are, thus, central to their application.

As part of the filing with the Court by the WJRO and the State of Israel, Professor DellaPergola has used demographic projections together with an index based on a wide variety of “macro-social indicators” to calculate a recommended “geographical key to total resource allocation” among victims in various countries/regions.⁵ While recognizing that: “Ideally, one would directly approach the pertinent issues at the individual or ‘micro-social’ level,” DellaPergola contends that the availability of comparable individual-level data in all countries where Jewish Nazi victims live is insufficient for such an approach.

¹ See *In Re Holocaust Victim Assets Litigation*, 105 F. Supp. 2d 139 [E.D.N.Y. 2000]

² WJRO and The State of Israel. *In Re: Holocaust Victim Assets Litigation. Memorandum of the State of Israel and WJRO in support of submissions to the Special Master*. February 27, 2004.

³ S. DellaPergola. *Neediness Among Jewish Shoah Survivors: A Key to Global Resource Allocation*. Report presented to the Hon. Nathan Sharansky, Minister of Diaspora, Social and Jerusalem Affairs, Government of Israel, Jerusalem and World Jewish Restitution Organization, Jerusalem. January 2004.

⁴ A. Hahn, S. Hecht, T. Leavitt, L. Saxe, E. Tighe, with A. Sales. *Jewish Elderly Nazi Victims: A Synthesis of Comparative Information on Hardship and Need in the United States, Israel, and the Former Soviet Union*. Brandeis University, Waltham, MA. January 2004.

⁵ DellaPergola 2004 at note 3.

DellaPergola's approach is an ambitious attempt to assess the relative neediness of Jewish Nazi victim populations around the world and to translate this neediness into a recommended allocation of available funds. It brings together information on national level indicators for countries around the world. These indicators include both those describing entire countries or populations and those characterizing the Jewish population in individual countries. Nevertheless, while we concur with the desire for better information about elderly Nazi victims, particularly at the individual level, Professor DellaPergola's index of neediness is extremely problematic. Conceptually, the index is based on a series of assumptions that have not yet been tested. Alternative analytic methods to standardize and weight index scales would yield very different conclusions about resource allocations. Furthermore, the suggested allocation of resources that is based on the index makes demographic assumptions that are directly contradicted by data on the populations described.

In this report, we discuss research issues associated with DellaPergola's proposal and test the sensitivity of his estimates using alternative assumptions. While it is not suggested that any set of assumptions described herein provides the "correct" answers, *different assumptions and/or different ways of handling the same raw data can lead to radically different answers. This suggests that the proposed index cannot be used as the basis for allocation decisions.*

II. ALLOCATION DECISION MODEL: $ALLOCATION = NUMBER\ OF\ VICTIMS \times NEEDINESS$

To assess the model, it is first necessary to describe the components and some of the underlying assumptions. DellaPergola's proposed allocation model is an attempt to bring meaning and structure to the complicated issues associated with the identification of "need" among Jewish Nazi victims throughout the world. He correctly notes that decisions about distributions depend both on the estimated numbers of survivors in regions, as well as the estimated need among those survivors and his analysis hinges on estimates for both of these types of data. The elements of his model are summarized in Table 1.

Total Resource Allocation (TRA) depends on the Total Neediness Index (TNI), and the estimated number of victims. The TNI consists of 13 macro-indicators in four categories: demographic, health, socioeconomic, and purchasing power. Nine of the indicators are based on national level indices found in the United Nations Development Program's *Human Development Report – 2003* (7 of 9 indicators), the Central Intelligence Agency's *World Factbook, 2002*, and the World Bank's website. The other four indicators are based on DellaPergola's own work to measure characteristics of the Jewish population in each country.

The suggested allocation of resources is determined by multiplying the TNI by the estimates of the number of Jewish Nazi victims in each geographical region. His estimated Jewish Nazi victim population, TNI values and recommended allocations are shown in Table 1 below. We include in this table the percentage of victims by region so that allocations can be compared to these estimates.

Exhibit 1. The Total Neediness Index

The Total Neediness index is comprised of 13 indicators divided into four sub-indices:

Total Demography Index (TDI)

- *Aging ratio* – the ratio of the number of Jews aged 75 and over to the number of Jews aged 65 and over.
- *Age dependency ratio* – the ratio of the number of Jews aged 65 and over to the number of Jews aged 25-64.
- *Gender equity measure* – an index of gender inequality in each country.
- *Recent immigration load* – a measure of the percentage of Jewish immigrants among the total Jewish population

Total Health Index (THI)

- *Life expectancy at birth*
- *Health expenditure per capita*
- *Access to improved sanitation* – a measure of the quality of health and hygienic environment
- *Access to affordable essential drugs*

Total Socioeconomic Index (TSI)

- *Gross Domestic Product per capita*
- *Gini coefficient of income distribution* – a measure of income inequality
- *Percent unemployment*
- *Jewish social status* – a measure of the relative socioeconomic standing of the Jewish population, based on the percentage of Jews with a higher education degree.

Purchasing Power Parity Index (PPPI)

- Gross National Income per capita adjusted to reflect purchasing power differentials in each country – this is presented as a measure of the efficiency of monetary resources in each country.

All indicators are:

- Weighted by total Jewish population
- Standardized such that all are on scales that range from 0 to 1. Values for each indicator are determined by equating country with the worst value (the one indicating the greatest neediness) to 1 and dividing all other country values by the value of the most needy country.

Calculation:

Total Neediness Index is the average of the index values for component indicators.

$$TNI = (TDI + THI + TSI + PPPI)/4$$

Resources are then allocated based on the following formula:

$$TSNM = \text{Total Victim Population} * TNI$$

Total Survivor Neediness measure is the TNI multiplied by the survivor population.

$$TRA = TSNM_i / \sum(TSNM_i)$$

Total Research Allocation (% of total resources each region is allocated) is obtained by dividing each region's TSNM by the sum of the TSNM values across regions.

TABLE 1: PROPOSED ALLOCATIONS IN THE DELLA PERGOLA MODEL					
	Estimated Nazi Victim Population	Estimated Percent of Victim Population	TNI	TSNM: Total Survi- vor Needi- ness	Recommended Allocation Per- centage
Israel	508,100	46.5	.815	414,100	48
FSU/Eastern Europe	183,700	17	.784	143,500	17
North America	184,700	17	.695	128,300	15
Other	216,200	20	.789	170,600	20
Total	1,092,700	100		856,000	100

Source: S. DellaPergola 2003, P. 21, Table 1. All numbers in this table are presented as in the DellaPergola report, with the exception of the total victim population, which is reported as 1,092,000. Actual population weighted by TNI numbers are slightly different than the numbers reported in this table, which we assume to be the result of rounding TNI numbers. These differences do not alter allocation percentages

Note that DellaPergola’s recommended allocation percentages are only slightly different than his estimates of the distribution of Jewish Nazi victims. Applying the model results in a small increase of about 2% for Israel above the percentage of Nazi victims residing there (according to DellaPergola’s victim estimates) and a small decrease of 2% for North America. Recommended allocations for the Former Soviet Union/Eastern Europe and Other country categories are the same as their share of the victim population. This indicates, as DellaPergola points out, that the “advantages” and “disadvantages” of the various regions as measured by the chosen indicators in large part cancel each other out. That is, *based on DellaPergola’s proposed allocation model, allocations in effect are based on the distribution of the survivor population and the measure of neediness has little effect on the overall estimates of resource allocation.*

Nevertheless, the final suggested allocation is highly dependent on assumptions used in determining both the estimated numbers of victims and their neediness. These assumptions are examined in the following sections, beginning with the population estimates.

IIA. ESTIMATES OF NAZI VICTIM POPULATION WORLDWIDE

As noted, although DellaPergola’s allocation formula includes multiple components, the result is almost entirely determined by the estimated size of the Jewish Nazi victim population. DellaPergola’s population estimates, however, are very different from others that have been reported.⁶ The greatest discrepancy is between DellaPergola’s⁷ 2003 estimate of 1,092,000

⁶ See, in particular, I. Sheskin. *Estimates of the Numbers of Nazi Victims and Their Economic Status*. Miami, FL. 2004, and Ukeles Associates Inc. *An Estimate of the Current Distribution of Jewish Victims Of Nazi Persecution*. International Commission On Holocaust Era Insurance Claims. 2003.

⁷ S. DellaPergola. *Review of relevant demographic information on world Jewry*. Final report presented to The Hon. Secretary Lawrence S. Eagleburger Chairman The International Commission on Holocaust Era Insurance Claims. 2003.

Nazi victims worldwide and a 2003 estimate by Ukeles, who concludes that there are only 687,900 victims.⁸ Sheskin reaches a conclusion that, overall, splits the difference between DellaPergola and the later Ukeles' estimates and finds 888,500 victims worldwide.⁹

The previous Brandeis report noted that the discrepancy among estimates primarily involves differences in findings about the number of victims living in Israel.¹⁰ We noted two factors accounting for these differences. The first reason lies in the differences in the geographical areas considered to be under Nazi rule. The second reason relates to differences in methods. Both estimates use a similar definition of Nazi victims based on the characterization of the "Looted Assets Class" used to determine eligibility for Court assistance.¹¹

"Every individual who lived under or fled from Nazi occupation is a class member, since virtually every such person may be presumed to have been looted by the Nazis."

Differences in how this definition has been operationalized are central to evaluating discrepancies among estimates.

IIA1. ESTIMATES OF THE NUMBER OF JEWISH NAZI VICTIMS IN ISRAEL

DellaPergola estimates that there are 511,000 Nazi victims currently living in Israel, while Ukeles estimates only 265,000.^{12,13} While the lower estimate focuses on victims of European origin,¹⁴ the higher estimate includes victims of North African and Middle-Eastern origin.¹⁵ If it is accepted that certain countries in North Africa and the Middle East were subject to Nazi rule or their allies (namely Morocco, Tunisia, Algeria, Libya, Syria and Lebanon) then estimates limited to people of European origin should be recognized to be too low.

Ukeles' 2000 report used respondents' self-identification as Nazi victims as the basis for his estimate (220,000 victims who reported that they lived in a country under Nazi rule or the

⁸ Ukeles. 2003 at note 6. Note also that this estimate is lower than Ukeles' 2000 findings, which estimated that there were 883,000 victims worldwide, of which 340,000 were in Israel (these population numbers are the mid-points of estimated ranges). Ukeles, Jacob B. *Appendix One An Estimate of the Current Distribution of Victims of Nazi Persecution*. A Plan for Allocating Successor Organization Resources Report of the Planning Committee, Conference On Jewish Material Claims Against Germany. 2000.

⁹ Sheskin. 2004. at note 6.

¹⁰ Hahn et. al. 2003 at note 4.

¹¹ J. Gribetz & S. C. Reig, *In Re: Holocaust Victims Assets Litigations. Special Master's Interim Report on Distributions and Recommendations for Allocation of Excess and Possible Unclaimed Residual Funds*. October 2, 2003, p. 85-86.

¹² DellaPergola. 2003 at note 7.

¹³ Ukeles. 2003 at note 6. Ukeles' 2003 estimate for Israel is based on the JDC-Brookdale estimate published in their 2003 report. See: Brodsky, J. Beer, S. & Schnur, Y. *Holocaust survivors in Israel: Current projected needs for nursing care at home*. Jerusalem: JDC Brookdale Institute. 2003.

¹⁴ Research reports on the Nazi Victims in Israel focused only on European victims. See Brodsky, J. *Background material for meeting of steering committee on Holocaust survivors*. Jerusalem: JDC Brookdale Institute. 2000. and Brodsky et. al 2003 at note 13.

Ukeles. 2003 at note 6.

¹⁵ DellaPergola. 2003 at note 7.

direct influence of Nazi rule between 1933 and 1945).¹⁶ The 2000 estimate included people born in Asia and Africa. Because the survey focused on those living in urban areas and was 3 years old when the report was submitted, several adjustments were made to survey results. The adjustments were done to account for people in institutional settings and those living in rural areas which were not included in the survey. The estimate was also adjusted to include those who were not 60 when the survey was conducted. Another adjustment was made to account for people who fled their country of origin shortly before or during the Nazi occupation (flight cases). The final estimate of Nazi victims living in Israel was 340,000.

Ukeles' estimates are based on the Israeli Survey of the Elderly (ISE), which was conducted in 1997 and has served as the primary data source for estimates of the number of survivors in Israel.¹⁷ The ISE estimates are based on what can be considered a "direct" assessment of survivor status: individuals identify themselves as having lived in or fled from a country under Nazi rule by answering direct questions about their situation during that period. The questions included on the ISE are.¹⁸

1. *Between the years 1933 and 1945 did you ever live in a country that was under Nazi rule or in a country that was under the direct influence of Nazi rule?*
2. *Where you in any of the following situations? (Ghetto, hiding, labor camp, concentration/death camp)?*
3. *In which countries did you live between 1933 and 1945? (Specify countries and years lived in that country).*¹⁹

These questions do not reflect respondents' subjective identification as Holocaust survivors, rather, they tap respondents' report of their actual situation and country of residence during the war. This direct approach used in such surveys, depending on the sampling method and other qualities of the survey (e.g., response rate), can provide good approximations of the characteristics of the larger population. The ISE is a bit dated but is, nevertheless, of sufficient quality that users can have confidence in estimates based on its data, particularly in terms of describing the victim population in 1997. Adjustments can be made to take into account estimated changes since then.

In contrast to this direct approach that asks respondents to identify their circumstances during the period in question, DellaPergola employs an indirect method of assessment, in which he infers victim status based on the following criteria (all three conditions must maintain):

1. *Self-identify as Jewish*
2. *Born before 1946*
3. *Born in a country that was under Nazi rule or Nazi influence between 1933 and 1945 (Assumes that those born in these countries lived there between 1933 - 1945).*

¹⁶ Ukeles. 2000 at note 8.

¹⁷ Brodsky et. al. 2003 at note 13; Ukeles 2003 at note 6.

¹⁸ Our translation from Hebrew

¹⁹ Flight cases were identified as those who reported living in European countries occupied by Nazi's during certain years between 1933 and 1945. These respondents did not self-identify as living under Nazi rule.

These estimates are then adjusted to account for those who immigrated to Palestine before 1932, those who left their countries of origin for a third country and were not exposed there to Nazi or associated rule before immigrating to Israel, and those who lived in countries only partially under Nazi rule. DellaPergola claims that this approach used for all countries gives identical chances for inclusion to contemporary survivors regardless of country of residence.²⁰

Differences in the methods associated with the Ukeles and DellaPergola estimates are summarized in Table 2.

TABLE 2: DATA SOURCES AND METHODS USED IN NAZI VICTIMS ESTIMATES									
	DellaPergola (2003)			Ukeles (2003)			Ukeles (2000)		
	USA	Israel	FSU	USA	Israel	FSU	USA	Israel	FSU
Source of data used	Survey	Census	Census	Survey	Survey	Census	Survey	Survey	Census
Operationalization of Nazi Victim Definition	Indirect	Indirect	Indirect	Direct	Direct	Indirect	Direct	Direct	Indirect
Definition of Jewish population ¹	Core Jews ²	NA Pop.	Core Jews	Core Jews	NA Pop.	Core Jews	Core Jews	NA Pop.	Core Jews
Born before 1946	Yes	Yes	Yes	Yes ³	Yes ³	Yes	Yes ³	Yes ³	Yes
Immigrated before 1933	Yes	Yes ⁴	N/A	Yes	Yes	N/A	Yes	Yes	N/A
Countries under Nazi Rule or influence include North-Africa and Middle-East	Yes	Yes	N/A	Yes	No	N/A	Yes	In Part	N/A
Estimate includes all those of relevant age born in relevant country of origin ⁵	Yes	No	No	N/A	N/A	No	N/A	N/A	No
Estimated number of Survivors	174,000	511,000	146,000	109,900	265,000	149,800	136,600	340,150	208,000
Notes: 1. Core Jews are defined as those who when asked identify themselves as Jews; or are identified by another household member as Jewish (DellaPergola 2003). Israeli data distinguish between Arab and non-Arab population. The majority of the non-Arab population is Jewish. 2. NJPS included as Jews also those who identified as something other than Jewish but had a Jewish background. 3. Incorporated into survey design. 4. See discussion in next section. 5. Adjustments for people not affected is not applied consistently across regions. See discussion on US data below.									

In order to examine the implications of using the indirect versus direct methods, we conducted our own analyses of the data from the ISE.²¹ Specifically, we examined the percent of those who self-identified as having lived in or fled from countries under Nazi rule by country

²⁰ Yet the statistical chances for inclusion according to the formulation suggested by DellaPergola are not equal and do depend on country of residence. Thus, for example, those born in the FSU of the relevant population have different chances of inclusion depending on their current country of residence: Those currently living in the FSU have a chance of 67% of being included, those living in Israel have a chance of 65% and those living in the United States have a chance of 95% (All figures reported or calculated for the entire FSU are based on tables A-1, A-2 and A-3 in DellaPergola. 2003 at note 7.)

²¹ The original data-file of the Survey of Elderly in Israel was not widely available for independent analysis and most reports of the data were based on reports provided by JDC-Brookdale. We recently acquired the datafile.

of birth (Table 3).²² The column labeled “Total Nazi Victims” represents the percentage of respondents born in each country who indicated that they had lived under or fled from Nazi rule. The last column, “Included in DellaPergola’s Count”, is the percentage of people within each country that DellaPergola estimates to have been victimized by Nazis.²³

Country of Birth	Self Report Lived Under Nazi Rule (%)	European Flight Case (%)	Total Nazi Victims (%)	Included in DellaPergola’s Count (%)
Turkey ¹	0.3%	--	0.3%	--
Iraq ¹	1.2%	--	1.2%	--
Yemen ¹	1.1%	--	1.1%	--
Iran ¹	1.7%	--	1.7%	--
Rest of Asia ¹	4.1%	--	4.1%	--
Egypt ¹	1.4%	--	1.4%	--
Israel ¹	0.3%	--	0.3%	--
Syria and Lebanon ²	0.3%	--	0.3%	95%
Morocco ²	8.7%	--	8.7%	95%
Algeria and Tunisia ²	39.5%	--	39.5%	95%
Rest of Africa ^{2,3}	55.2%	--	55.2%	95%
FSU	33.4%	36.7%	70.1%	65%
Poland	65.3%	7.6%	73.0%	95%
Romania	87.7%	3.9%	91.5%	95%
Bulgaria and Greece	83.4%	1.6%	85.0%	95%
Germany and Austria	74.3%	9.0%	83.3%	95%
Czech Republic, Slovakia and Hungary	76.3%	8.2%	84.5%	95%
Rest of Europe	45.8%	8.1%	53.9%	90% ⁴

Notes: 1. Countries not included in DellaPergola’s relevant areas. 2. Countries in North Africa/Middle East included by DellaPergola. 3. Includes Libya. 4. Rest of Europe is grouped differently in the DellaPergola table. Percent included here is an average for the countries in this region.

Except for the FSU, the percentage used by DellaPergola is higher than the percentage of respondents born in each country who self-report that they lived under or fled from Nazi rule. The discrepancies are most pronounced for the North African countries, where only 20% identify themselves as living under or fleeing from Nazi rule compared to the DellaPergola estimate of 95%.²⁴ In the case of North African and Middle Eastern countries, even if one

²² The best way to determine exposure to Nazi rule would be to look at the countries where respondents lived between 1933 and 1945 and whether the years when they lived in these countries correspond to the time period in which these countries were under Nazi occupation or Nazi-allies rule. Unfortunately, CBS confidentiality policy requires that data that can be used to identify respondents (especially year of birth and country of origin data) be grouped into categories. Data regarding country where lived between 1933 and 1945 is grouped in the continent level. This precludes a direct analysis of countries where lived between 1933 and 1945.

²³ Column g in Table A-3 in DellaPergola 2003 at note 7.

²⁴ Middle Eastern and North African countries considered by DellaPergola to be under Nazi influence include Syria, Lebanon, Libya, Morocco, Algeria, Tunisia. The overall percentage of the 1997 ISE respondents who were born in these countries and consider themselves to be Nazi victims is 20%.

adjusts for those under the age of 60 and other limitations of the ISE, it is unlikely that the country of birth estimates would be anywhere near the 95% estimated by DellaPergola. Thus, while the Ukeles 2003 estimate underestimates the number of victims because no victims from North African countries were included, DellaPergola overestimates the number of Nazi victims by including almost all older North African and Middle Eastern Jews²⁵ now living in Israel, many of whom do not report that they lived under Nazi rule.²⁶

The differences in European Nazi victim population estimates that result from the direct and indirect methods are smaller than the North African and Middle Eastern differences. The majority of victims, however, come from European countries. Thus, the effect is substantial in terms of the number of victims that would be subtracted from the total estimate for Israel if self-reported victim status is used to adjust country of origin-specific counts.

One can also examine the extent to which the two approaches differ by applying DellaPergola's criteria to survey respondents (See Table 4). The estimated number of victims who are identified by self-reports is greatly different than the number who would be categorized as victims based on country of birth criteria. *The magnitude of the differences varies significantly by country, but, overall, if one were to apply DellaPergola's criteria to the ISE, one would estimate approximately 25% more victims than would be estimated based on self-reports.*

TABLE 4: COMPARISON OF ESTIMATED NUMBER OF NAZI VICTIMS IN 1997 BY COUNTRY OF BIRTH			
Country of Birth	# Victims based on Self-Report	# Victims Country of Birth Criteria	% Difference (Country of Birth vs. Self-Report)
Turkey	45	--	--
Syria and Lebanon	29	7,918	>1000%
Iraq	457	--	--
Yemen	253	--	--
Iran	280	--	--
Rest of Asia	327	--	--
Morocco	4,110	44,636	986%
Egypt	165	--	--
Algeria and Tunisia	5,383	12,933	140%
Rest of Africa	6,755	11,633	72%
FSU	125,937	116,803	-7%
Poland	45,302	58,989	30%
Romania	63,422	65,820	4%
Bulgaria and Greece	9,758	10,907	12%
Germany and Austria	14,566	16,620	14%
Czech Republic, Slovakia and Hungary	18,024	20,271	12%
Rest of Europe	6,238	10,407	67%
Israel	392	--	--
Total	301,441	376,937	25%

²⁵ From countries mentioned above (Morocco, Tunisia, Algeria, Libya, Syria and Lebanon).

²⁶ This is also true perhaps for France, to where many Jews of North African descendant have migrated.

Applying this estimated percentage difference to DellaPergola's 2003 estimates would yield an estimate of approximately 409,000 victims in Israel, which is about 102,000 fewer than DellaPergola had estimated, and about 142,000 more than Ukeles' 2003 had estimated. It yields a projection, however, that is fairly consistent with the Ukeles' 2000 estimate of approximately 340,000, particularly considering adjustments that would need to be made to this estimate to take into consideration the population groups not included in the survey and changing demography in Israel since 1997.

The present approach -- of adjusting population figures based on the direct assessment of victim status reported by the elderly, along with making better use of the ISE data -- is also more consistent with the historical record. There is no doubt that Jews living in North African and Middle Eastern countries occupied by Nazi's or Nazi allies during WWII suffered from the introduction and enforcement of anti-Jewish legislation.²⁷ As noted by DellaPergola and others, the Holocaust legacy of victims of these origins has been generally neglected. Abitbol in his detailed historic account of the situation of Jews in Algeria, Tunisia and Morocco between 1940 and 1943 sheds much light on the fate of North African Jews during this period.²⁸ The brief and incomplete review of the literature suggests the following:

1. Although Jews in these countries suffered some residual effects of the Vichy regime after 1943, the civil and other rights of Jews were restored in the spring of 1943. Thus, Nazi or Nazi-allies rule ended in this region in 1943 and it stands to reason that persons born after the end of 1943 were not subject to Nazi rule or influence.
2. Abitbol notes that although all Jews in the region were exposed to anti-Jewish laws, the laws were formulated and enforced differently in different regions (more severe and rigorously enforced in Algeria whose residents were French citizens than in Morocco and Tunisia).²⁹ He also notes that the degree to which these laws affected Jews depended to a large extent on the integration of the Jewish population in the European culture and economic structure in the region. Jews in Morocco and Tunisia were to a greater degree traditionalists and removed from the European society in the region.³⁰

²⁷ Anti-Jewish measures and legislation were introduced by the Vichy administration in the French colonies of Algeria, Tunisia, and Morocco with the abrogation of the Cremieux decree in October 7, 1940. Restitution of Jews' civil rights took place shortly after the Allies occupation of the region in spring 1943. Parts of Tunisia were occupied by the Germans between November 1942 and May 1943. See M., Abitbol. *The Jews of North Africa During the Second World War*, Wayne State University Press: Detroit. 1989. Fascist racial laws were introduced in Libya in 1938, but were not enforced rigorously until 1941. See M. Roumani. Aspects of the Holocaust in Libya. In S. Gaon & M. Serels (Eds.) *Del Fuego: Sepharadim and the Holocaust*. Sepher-Hermon Press: New York. 1995. With regards to the Middle East there are several accounts of the effect of anti-Jewish German and Italian propaganda on Iraqi pro-Nazi activity and similar association between the Nazi's and organizations in Syria and Lebanon. See: Abitbol p.55, *ibid* and I. Alters. Holocaust in the Middle East: Iraq and the Mufti of Jerusalem. In S. Gaon & M. Serels (Eds.) *Del Fuego: Sepharadim and the Holocaust*. Sepher-Hermon Press: New York. 1995.

²⁸ Abitbol. 1987 at note 27.

²⁹ Abitbol. 1987 at note 27, p. 63.

³⁰ Abitbol. 1987 at note 27 p. 68.

3. Except for the German occupation of parts of Tunisia between November 1942 and May 1943, sanctions and anti-Jewish measures imposed in these three countries were independent of German demands regarding the Jews in Europe and were recognized to be the sole responsibility of the Vichy administration.³¹

Although there is no consensus whether these individuals should be considered victims, and it is a matter of law whether Jews who lived in these regions during the 1933-1945 period qualify as Nazi victims under the definition of the “Looted Assets Class,” at least some of these individuals appear to qualify.³² *As detailed above, we conclude that the Israeli population figure is at least 100,000 more than Ukeles’ estimate, but 125,000+ less than DellaPergola’s estimate.*³³

IIA2. ESTIMATES OF THE NUMBER OF JEWISH NAZI VICTIMS IN THE USA

One can conduct similar comparisons with data used to generate the estimated size of the victim population in the United States. Although not as large (or reliable) a sample as the ISE, particularly not for purposes of estimating population sizes, the National Jewish Population Survey (NJPS) in the USA does allow for comparisons of the direct and indirect methods.³⁴ As detailed elsewhere, NJPS was a national survey designed to locate a “rare” population.³⁵ Because it relied on random digit dialing (RDD), and the response rate for the Jewish population was less than 20%, there are a host of potential issues about generating population estimates. This is especially so because the victims were a “rare” population even within the sample. Also, the survey did not count institutionalized individuals and there are unknown potential biases because of language issues for immigrants (particularly those from the FSU).

Comparing estimated numbers based on responses to the questions having to do with whether respondents lived or fled from Nazi occupation to estimated numbers based on the country of birth criteria, again, one finds discrepancies in the estimated rates within countries (see Table 5). For many countries, DellaPergola’s estimates and those arrived at by the direct approach are similar. However, there is a great discrepancy between the 100% inclusion suggested by DellaPergola and the percentage of those born in the FSU European countries who self-report being victims, especially in Russia where only 37% of immigrants born before 1946 report being victims. Thus, *while the estimate of US victims is likely greater than the direct estimate from NJPS (c. 122,000), there is a potential for over-counting of American victims in the DellaPergola estimates because he treats a higher than actual percentage of older immigrants from the FSU as victims.*

³¹ Abitbol. 1987 at note 27p. 59.

³² A. Barkat Who counts as a Holocaust survivor? *Ha’aretz* English Edition, April 18, 2004.

³³ A memo prepared by Jenny Brodsky of JDC-Brookdale, confirms these differences and the general magnitude of our suggested estimate of Nazi victims in Israel. October 12, 2003.

³⁴ It is difficult to have great confidence in differences observed using the NJPS data, however, since their utility for estimates of population sizes is extremely limited.

³⁵ See Kadushin et al. *Moreh Nevuchim (Guide to the Perplexed) for NJPS 2000-01. In Press. 2004.*

TABLE 5:
PERCENT OF NAZI VICTIMS BY COUNTRY OF BIRTH:
NJPS 2000-01 & DELLA PERGOLA'S ESTIMATE

Country of Birth	NV from NJPS	Fled from NJPS	% Nazi Vic- tims from NJPS	% included by DellaPergola
Austria		100.0%	100.0%	100%
Belgium	40.8%	59.2%	100.0%	100%
Czech Republic/ Czechoslovakia	55.6%	22.6%	78.2%	100%
Denmark	100.0%	--	100.0%	100%
France	29.9%	70.1%	100.0%	100%
Germany	12.3%	87.7%	100.0%	100%
Hungary	74.9%	9.6%	84.5%	100%
Italy	--	100.0%	100.0%	100%
Netherlands/Holland	--	--	--	100%
Poland	49.8%	25.9%	75.7%	100%
Romania	65.4%	34.6%	100.0%	100%
Switzerland	--	--	--	100%
Azerbaijan	69.2%	--	69.2%	0%
Belarus	17.9%	32.0%	49.9%	100%
Georgia	--	61.2%	61.2%	0%
Latvia	--	100.0%	100.0%	100%
Lithuania	100.0%	--	100.0%	100%
Moldova/Bessarabia	--	36.1%	36.1%	100%
Russia	5.1%	31.4%	36.6%	100%
Ukraine	18.5%	43.9%	62.3%	100%
Kazakhstan	100.0%	--	100.0%	0%
Uzbekistan	--	--	--	0%

IIA3. ESTIMATES OF THE NUMBER OF JEWISH NAZI VICTIMS IN THE FSU

Regarding the number of Jewish Nazi victims in the FSU, there has been some discussion about the differences in victim population estimates derived from national surveys and estimates based on actual counts of victims served by the *Hesed* agencies in the FSU. It is important to note that the criteria for inclusion as Nazi victim in the *Hesed* database is similar to that used in other surveys discussed above.³⁶ DellaPergola argued that “the fundamental weakness of such databases is that in the lack of continuous and painstaking updating of individual records – typically regarding those people who ever were relevant to a certain program, but over time increasingly lose a clear relationship to the current characteristics, eligibility, and most importantly existence of the persons included.” As a result, “...databases

³⁶ *Hesed* clients are asked about their place of residence during the war, whether they lived in a place occupied by the Nazi’s or their allies and whether they were in a concentration camp, labor camp or a ghetto.

such as *Hesed* and other similar ones are of little use in describing the actual population size composition for demographic research purposes.”³⁷

In fact, as DellaPergola notes, his estimate of Jewish Nazi victims in the FSU (146,300) is consistent with the count of victims in the *Hesed* database (126,156), given that *Hesed* numbers do not include those Jewish Nazi victims who fail to seek services from *Hesed*.³⁸ However, there are differences when one looks beyond the estimates for the entire FSU to estimates for individual countries. In particular, *the numbers of Jewish Nazi victims served by Hesed agencies in Ukraine and Belarus significantly exceed DellaPergola estimates for Jewish Nazi victims in these countries. As of November 2003, Hesed agencies in Ukraine were serving 50,453 victims, one-third higher than DellaPergola’s estimate of 37,793 victims. Similarly, agencies in Belarus were serving 11,297 victims, 23% more than DellaPergola’s estimate of 9,150. Again, these higher victim estimates do not include victims not served by Hesed, suggesting that the actual victim populations in these countries could be higher if Hesed database counts are reliable estimates of the number of Jewish Nazi victims being served.*

Hesed administrators have previously stated that the database is updated regularly to account for services provided and exit of clients due to death and emigration.³⁹ Although an independent audit of the database, involving interviews with a sample of clients, might provide the best evidence of whether the data are reliable or not, there are other ways to gain confidence in the data. Close examination of the database itself can provide us with some good evidence on whether the database is kept current and on whether those who are listed as current clients are actually receiving services.

We here present an analysis of *Hesed* database information for Nazi victims in Russia, Ukraine, Belarus, and Moldova, the four FSU countries with highest numbers of Jewish Nazi victims. The database includes all individuals who have participated in programs since the database was implemented and all services provided since the beginning of 2001.

The principal criticism of the *Hesed* database is that with such a large client base it is difficult to keep the database up-to-date with “status changes” such as death or emigration. Thus, the database will list as active some clients who are no longer actively served. We tried two different strategies for assessing this assertion. First, the current number of Nazi victim clients listed as active were examined in relation to the number of victim clients who have ever been served to see the magnitude of “outflows” from the *Hesed* programs and examined the types and numbers of program exits that have been recorded over time to see whether there has been a consistent pattern of recorded exits. Second, victims listed as active were examined to determine when they last received a *Hesed* service.

Data indicate that there have been significant outflows of Nazi victim clients in all four of the countries we examine. In Russia, 31% of victims who have been served by *Hesed* programs are no longer counted as active clients (as of December 31, 2003), having died, emigrated, or

³⁷ DellaPergola. 2004 at note 3, p.34

³⁸ S. DellaPergola. *Supplemental Report* for United States District Judge Edward R. Korman United States District Court, Eastern District of New York Case N.CV-96-4849 (ERK) (MDG) (Consolidated with CV-99-5161 AND CV-97-461). Jerusalem, March 2004., p. 11.

³⁹ See letter of Steven Schwager, Executive Vice-President at JDC to Judge Korman, December 19, 2003.

ended their relationship with their programs for some other reason. The percentages that are no longer clients are even higher in Ukraine (42%), Belarus (35%), and Moldova (47%).

The breakdown of reasons for client exits for each year in each of the four countries is shown in Table 6. These data indicate that there has been a reasonably consistent number of exits made from and recorded by *Hesed* agencies. Moreover, some known and expected patterns seem to be reflected accurately in the exit data. For example, emigration has been a bigger phenomenon in Ukraine than in Russia and this is reflected in the *Hesed* data for Nazi victims. Also, the number of deaths has increased as the programs have increased in size and as victim clients have aged. In sum, without a detailed audit there is no way of knowing whether agencies accurately recorded all exits and the reasons for them, but it appears that there has been an effort to change the database status of clients who no longer receive services.

TABLE 6: STATUS CHANGES AMONG NAZI VICTIM HESED CLIENTS BY YEAR AND REASON FOR EXIT				
	Deaths	Emigration	Other Reasons ¹	Total
Russia				
1998 or before	201	57	28	286
1999	362	196	35	593
2000	1033	650	114	1797
2001	2566	897	713	4176
2002	3597	901	1240	5738
2003	3734	873	1052	5659
Ukraine				
1998 or before	603	656	201	1460
1999	2073	3382	207	5662
2000	2646	3885	316	6847
2001	3288	3653	541	7482
2002	3293	2584	473	6350
2003	3254	2002	837	6093
Belarus				
1998 or before	211	173	28	412
1999	467	367	107	941
2000	604	579	72	1255
2001	640	507	83	1230
2002	639	334	75	1048
2003	609	237	43	889
Moldova				
1998 or before	46	4	82	132
1999	106	3	292	401
2000	76	29	205	310
2001	118	113	68	299
2002	126	150	50	326
2003	121	101	29	251
Note: 1. Categories included in "other" include: was refused services; re-fused services; left, reason unknown; and temporarily left.				

Perhaps even more persuasive of a consistent effort to update the database is the data on services received by victims listed as active clients. If there are many victims listed in the database as active clients who in reality are no longer being served by *Hesed* agencies, one would expect to see that many clients in the database have not received a service for quite some time. However, this is not the case. In order to be designated as an active client, a victim must have received a service in the previous 12 months (since the beginning of 2003 in the case of the database we looked at). But a very high percentage of those designated as active victims had received services much more recently (Table 7).

TABLE 7: PERCENT OF NAZI VICTIM HESED CLIENTS RECEIVING SERVICES IN LAST MONTH, LAST 3 MONTHS, AND LAST 6 MONTHS OF 2003			
	Received Services in:		
	Last Month (%)	Last 3 Months (%)	Last 6 Months (%)
Russia	77.9	82.4	94.4
Ukraine	95.9	96.4	98.1
Belarus	93.9	98.8	99.9
Moldova	98.7	99.1	99.6

The percentage of victims counted as active clients on December 31, 2003 that received at least one *Hesed* service in the prior month is 94% or more in Ukraine, Belarus, and Moldova and 78% in Russia. The percentage that received a service in the past 6 months is 94% or more in all four countries and nearly all those counted as active participants in Ukraine, Belarus, and Moldova received at least one service in the past 6 months.

These findings argue persuasively that there are relatively few victims listed as active clients who have died, emigrated, or left the Hesed system for some other reason. Thus, there is no reason to mistrust estimates of the Nazi victim population based on the Hesed database. In particular, findings for Ukraine and Belarus suggest that Nazi victim estimates based on census data are likely too low by a significant amount.

IIA4. SUMMARY OF DEMOGRAPHY ISSUES

If the residual of the Swiss banks settlement is to be distributed by region, most would agree that allocations should be a function of both the size of the Jewish Nazi victim population in various countries and regions as well as the extent of neediness, however this is determined, within the victim population in each country or region. Indeed, the DellaPergola allocation includes both of these factors, but his methods of combining them is problematic. The result is that the proposed allocations reflect where victims live, regardless of need.

The problems inherent in the proposed allocation are compounded because DellaPergola's estimates of the victim population are discrepant with other recent estimates, exceeding others by 150,000-250,000 worldwide. Most of the difference is due to a much higher estimate of victims in Israel, which raises the percentage of all victims who live in Israel to a level significantly above the percentages indicated in other estimates. The present analysis suggests that DellaPergola's estimated percentages of those who lived under Nazi control often greatly exceed the percentage of those who indicate so directly. For Israel the 2003 estimate is 25% higher than the estimate reached by applying the direct response percentages to the 2003 elderly foreign born population in Israel – including those from North Africa and some Middle Eastern countries. A similar analysis for the United States suggests that the estimated number of victims may be slightly higher using the country of birth criteria rather than self report criteria, especially with regard to older immigrants from the FSU, most of whom do not identify themselves as Nazi victims. Although the number of FSU immigrants may be overestimated, in general, the survey likely underestimates the number of victims.

Recently, DellaPergola has suggested that not only the distribution of Nazi victims around the world is pertinent to an allocation decision, but also that the number of victims originating in the FSU in each country should be considered. This is because the difficult circumstances of victims in the FSU have repercussions for the assessment of the neediness of victims in the United States and Israel as well.⁴⁰ DellaPergola's demographic studies clearly demonstrate the demographic shifts of the Jewish population in the past two decades. Since 1989 there has been substantial emigration of Jews from the FSU predominantly to Israel, but also to the United States and other Western countries.⁴¹ Analysis of the current circumstances of Nazi victims in the United States and Israel indicates that victims who are recent immigrants from the FSU are among the most needy.⁴² Thus, it is clear that this recent emigration changed the distribution of this needy population around the world. However, it should also be recognized that those who emigrated from the FSU now enjoy the substantially wider safety nets available in Israel and the United States. In his original formulation, DellaPergola suggests that this multidimensional nature of need is captured by The Total Neediness Index. This measure and issues related to the estimation of neediness in DellaPergola's formulation are discussed in the next section.

IIB. TOTAL NEEDINESS INDEX

The Total Neediness Index (TNI), while a novel application, is part of a growing trend among social policy analysts to develop macro-economic indices. A substantial increase in the amount of economic and social data collected internationally in recent years has led to the development and use of social and economic indices that are used to compare countries and to track the progress of individual countries over time. At the forefront in creating such measures is the United Nations Development Program (UNDP), which calculates and disseminates comparative indices such as the Human Development Index (HDI) and Human Poverty Index (HPI). Parallel to the development of these indices, there have been a number

⁴⁰ DellaPergola 2004 at note 38.

⁴¹ DellaPergola 2003 at note 7 and DellaPergola 2004 at note 38.

⁴² Hahn et al. 2004 at note 4.

of social scientists writing on the techniques for developing accurate and useful indices, including, prominently, Sudhir Anand and Amartya Sen of Oxford and Cambridge Universities, respectively, who have done much of the work underpinning the development of the UNDP indices.⁴³ This literature identifies the criteria by which index development should be evaluated. We summarize these in terms of three broad categories:

- **CHOICE OF INDICATORS:** how to decide which of all possible measures should be included on the index
- **STANDARDIZATION:** how to set indicators on a common scale so that they can be combined
- **AGGREGATION:** how to combine indicators

Our evaluation of the Total Neediness Index is guided by basic principles of research methods, but organized in terms of these three categories of index construction.

IIB1. CHOICE OF INDICATORS

The literature makes clear that the choice of indicators should be guided by conceptual as well as methodological concerns.⁴⁴ Conceptual questions have to do with whether the indicators are relevant to the construct of interest, in this case, that they measure neediness of Jewish Nazi victims. Methodological questions relate to the basic properties of the measures and whether they can be combined. These include measures of the relationships among the indicators (correlations), and whether the scale that the indicator is measured on provides consistent meaning across the full-range of the scale.

RELEVANCE OF INDICATORS

An index of neediness is valid only to the extent that the individual measures included are valid as indicators of neediness. The 13 different measures that comprise the TNI are proposed to identify “neediness” in some form such that combining them provides an overall reliable indicator of neediness of Jewish Nazi victims within a region. The particular indicators used by DellaPergola are either national level indicators or measures of a country’s Jewish population. There has, however, been no *a priori* consensus about what indicators would best represent the neediness of the Jewish Nazi victim population. Further, no data has been provided on the reliability or validity of any of these proposed measures as indicators of

⁴³ See, for example, S. Anand and A. Amartya. *Human Development Index: Methodology and Measurement.* Occasional Paper 12. Human Development Report Office. 1994. Other useful guides to this area are: F. Booyesen. “An Overview and Evaluation of Composite Indicators of Development.” *Social Indicators Research*, 59(2), 2002 (August): 115-51 and J. Salzman. *Methodological Choices Encountered in the Construction of Composite Indices of Economic and Social Well-Being.* Center for the Study of Living Standards: Ottawa. March 2003.

⁴⁴ Booyesen, 2002; Salzman, 2003 at note 43.

neediness. The weakest form of validity is “face validity” – do the indicators, on the face of it, appear to indicate neediness. DellaPergola argues that they do and provides rationale for each. We disagree with this reasoning and suggest that there are plausible alternative interpretations. Such disagreements can only be resolved by providing a more robust analysis that includes data on the convergent, discriminant, and predictive validity of these measures.

USE OF MACRO- VERSUS MICRO-INDICATOR DATA

National indicators can provide useful information about the environment for residents of different nations. For example, life expectancy can serve as a proxy for living conditions, standards of sanitation, or the effectiveness of the health care system. Per capita health expenditure may reflect the breadth and even the effectiveness of the health system. Such macro-level indicators, however, are not without limitations. Not only are there problems associated with biases in data collection,⁴⁵ but there is an obvious question as to whether national level indicators can reliably be used to determine the characteristics of small population subgroups, especially if the characteristics of the subgroup in question are significantly different than the national average. Many refer to this problem of using aggregate data (such as national statistics) to draw inferences about individuals, and particularly, to draw inferences about small sub-groups within the country, as the “ecological fallacy”.⁴⁶ As reported in the *Statistical Journal of the UN Economic Commission for Europe*, there is a need to disaggregate data:

Human rights analysis requires more disaggregated data to make possible analysis of progress from deprivational and distributional perspectives. Average progress is inadequate for monitoring human rights progress. Since goals and achievements focus on removing discrimination means data must be disaggregated to reveal the disparities between human development achievements of disadvantaged groups.

*Though disparities are a major concern in human development analysis, HDI is a measure of national average and does not integrate inequality. But the HDI can be disaggregated for different population groups to document disparities in achievements. National Human Development Reports have taken such analysis very far -- disaggregating HDI by region, or by ethnic groups, by racial groups.*⁴⁷

In contrast to national indicators, one can examine sources of data that are designed specifically to assess the characteristics of sub-populations. Local, within country, surveys can be useful for identifying the needs of a subgroup of the population, particularly one that is quite

⁴⁵ For example, measures based on national accounts do not accurately reflect consumption by the poor and can be threatened by issues such as non-compliance with standards for reporting in some countries. See A. Deaton. *Measuring poverty in a growing world (or measuring growth in a poor world)*. Princeton University. June 2003 for a review of biases in macro-indicators.

⁴⁶ Robinsom, W.S. (1950). Ecological correlations and the behavior of individuals. *American Sociological Review*, 15, 351-357.

⁴⁷ S. Fukuda-Parr. Indicators of human development and human rights--overlaps, differences ... And what about the human development index? *Statistical Journal of the UN Economic Commission for Europe*, 01678000, 2001, Vol. 18, Issue 2/3.

different from the average population in terms of age, income, health status, and other characteristics. There is very little local data specific to the assessment of Jewish Nazi Victims. In the FSU, the *Hesed* client database provides a rich source of information on the needs of the most needy – those who qualify for supplemental social services. In the United States, the general survey of the Jewish population (NJPS), provides some limited local data on Jewish Nazi victims, as do a number of other local surveys within specific regions in the US. And, in Israel, a 1997 survey of the elderly has provided the most comprehensive, systematic source of data to date.⁴⁸ The availability of data in other regions is unknown.

Absent data on the specific population of Nazi victims, there may be other locally relevant data, such as data on the elderly. Though there may be some differences between Nazi victims and the general elderly population within a country – attributable perhaps to long-term effects of trauma or even perhaps their ethnic heritage. In most cases, it is likely that their needs, at this point in their later years, are not unlike other similar elderly populations. Regions will vary in the availability of such local sources of data, but where available, they should be considered in combination with other available sources of data.

The quality of such local survey data is greatly dependent on the techniques and methods of data collection. Issues associated with poorly designed surveys or problematic sampling methods and low response rates threaten the validity of conclusions that can be drawn. Most of these sources of bias, however, are identifiable and inferences can be tempered to take into account these known sources of error. To suggest that no information can be derived from local data because there is no universal, systematic source of data available at the local level would be to ignore a number of potentially valuable sources of information.

To compare constructs such as deprivation or neediness across countries, one needs to balance the strengths and limitations inherent in comparisons that derive from macro-level indicators with the strengths and limitations inherent in micro-level indicators. To examine one and ignore the other can lead to very different conclusions.⁴⁹ This was the focus of our earlier report in which we reviewed both sources of data, noting the limitations associated with each.

Clearly, both macro and micro- level indicators are relevant for the assessment of the needs of the Jewish Nazi Victim population worldwide: macro-indicators for purposes of identifying the context in which victims live and micro- for identifying the specific needs. More needs to be done to examine the integration of micro- and macro- indicators.

ALL MEASURES MUST INDICATE NEEDINESS

In addition to greater consideration given to whether neediness among survivors is adequately described via macro-level or micro-level indicators, greater consideration needs to be given to the relationship between individual indicators and neediness. To understand whether DellaPergola's proposed allocation formula is a reasonable, each of the indicators needs to be examined and a determination made as to whether they indicate neediness,⁵⁰ Be-

⁴⁸ See Hahn, et. al., 2003 at note 4 for a review of these data sources.

⁴⁹ Cf. Deaton, 2003 at note 45.

⁵⁰ See National Research Council. *Preparing for an Aging World: The Case for Cross National Research*. National Academy Press: Washington, D.C. 2001 for identification of data sources and issues that should be considered when conducting international comparisons of economic and social well-being of elderly populations.

low, we examine each of these in terms of their face validity, noting where the rationale offered for the use of the indicator is problematic. In the context of social science research, disagreements such as these can only be obviated by providing data, as described above, on the validity of these measures.

Indicators that are unclear as measures of neediness among Nazi victims within a country:

- Aging Ratio
- Gender Equity
- Recent Immigration Load
- Jewish Social Status
- Purchasing Power

- *AGING RATIO*: The rationale for using the ratio of older elderly (75+) relative to younger elderly (65+) is unclear. DellaPergola suggests that the greater the number of age 75+ Jews relative to all those over 65, the more frail and needy the population must be. However, it could be argued that the reverse is true, that a higher percentage of age 75+ people within the elderly population is indicative of a healthier, more robust elderly population that for one reason or another is less needy than a population where a smaller percentage survive to older ages. Longer life spans are typically employed as an indicator of the health of a nation. More needs to be done to identify the association between this ratio and the neediness that the measure is proposed to reflect.
- *GENDER EQUITY*: DellaPergola cites the United Nations Human Development Report (2003) as the source for data on gender equity. He describes the index broadly as “an index of gender inequality in each country of residence.” According to his argument, since a majority of the elderly is female, the less equal the status of women, the greater the group's neediness. It should be noted, however, that the gender equity measure used by the UN is a composite of female/male life expectancy, female/male literacy rates and female/male earned income, all including adjustments for female/male total populations. Thus, whether this index reflects the relative frequency of female elderly as a demographic indicator or instead is a more general indicator of health or socioeconomic conditions is unclear (and also may result in health or socioeconomic conditions contributing more to the assessment of neediness than described). Further, it is unclear how literacy rates and even earned income (given that most victims are no longer employed) relate to the neediness of the Jewish Nazi victim population. The issues faced by women, particularly older women living alone, of social isolation and economic need, may be better addressed by more direct measures.
- *RECENT IMMIGRATION LOAD*: The underlying assumption behind the use of the immigration load measure as an indicator of neediness among Nazi victims is that immigration puts a disproportionate burden on the host country. Such a measure

confounds the neediness of the victim population with measuring the existing resources within a country available to address the needs of the victim population. Certainly the neediness of an immigrant population varies as a function of the conditions from which they emigrated and the conditions to which they move. In some instances, it may be much easier for the wealthier and healthier within a population to emigrate. In such cases, their arrival may be a boon to the host country as they provide an energetic workforce that may be willing to work for comparatively low wages, thereby adding to productivity and the tax base. Societal burdens may increase in countries that immigrants are leaving, since the populations that are left behind may consist disproportionately of those who are too old or do not have the money or the good health to be able to relocate.

Further, it is not clear why the immigration indicator should be limited to Jewish immigration in an international comparison such as this. While Israel's immigration is mostly Jewish, in other countries there is a mixture of ethnicities and nationalities, and the distribution or availability of resources is dependent on the entire immigration pattern rather than Jewish immigration alone.

In addition to these conceptual problems, the measure is reported as the percentage of Jewish immigrants among the total Jewish population of a country. Examination of the raw data, however, indicates that the data correspond to values from 1 to 5 and represents a subjective ranking based on "general notions of immigrant impact."⁵¹ The application of a general notion appears contradictory to the desire for systematic data on neediness. Any claims that this measure is an indication of neediness must be supported by data that speaks to the validity of this measure -- that is, that it does, in fact, measure neediness. Without additional information, there is no way to identify the utility of these data.

- *JEWISH SOCIAL STATUS*: Jewish social status, as measured by the percentage of Jews with a higher education degree, does not appear to have much relevance to the measurement of neediness among Nazi victims. Because of different education systems, the percentage of people getting a higher education degree may not have the same meaning in different countries, nor will it have the same implications for determining relative neediness of the Jewish populations between countries. Therefore, Jewish social status, to the extent that it is based solely on regionally defined educational attainment, may not be comparable.
- *PPPI*. DellaPergola writes that with any formula for resource allocation, it is "imperative to efficiently use the limited resources available." He proposes that a version of the Purchasing Power Parity Index be used for this purpose. The PPP index described by DellaPergola is not to our knowledge a standard indicator among economists. DellaPergola proposes a measure called the "PPP/GNI Ratio", which appears to be the ratio of two GNI measures, one estimated as US dollars (using the Atlas method based on exchange rates) and the another in international monetary

⁵¹ DellaPergola. Personal communication. April 16, 2004.

units (using the purchase power parity conversion factor). DellaPergola suggests that such a ratio provides a “measure of the efficiency of monetary resources in a given national economy ... the less efficient the Dollar, or in other words the higher the cost of living, the greater the incidence in neediness.” This measure in no way indicates the neediness of a country, of a people, or of a sub-population. If anything, it provides information on the extent to which a country’s exchange rate might be over- or under-valued. Such information might be useful when considering the conversion of dollars allocated to local currency. Exchange rates, however, are so volatile, that any such adjustment would only be relevant on the day that allocations are made. It makes no sense to incorporate such a measure into an index of neediness. To the extent that purchasing power parity needs to be considered when examining indicators of neediness, measures that adjust for PPP, such as GDP PPP, should be employed.

IIB2. METHODOLOGICAL CONSIDERATIONS IN THE CHOICE OF INDICATORS

Index development does not consist merely of identifying a set of relevant indicators and then combining them into a single measure. The individual indicators identified must be examined in terms of several different properties in order to determine whether it is suitable to combine them.⁵² The lack of attention to basic properties of index/scale construction, raises questions about the soundness of the proposed model.

Qualities of indicators necessary to combine them:

- Related, but not redundant
- Appropriate Scaling/Standardization
- Appropriate Weighting

RELATED INDICATORS

Indicators used in constructing an index must be correlated to some degree but are not consistently correlated in the TRA model. The indicators must show some degree of relationship (correlation) to have confidence that combining them makes sense – that they measure the same underlying single construct, in this case, neediness. They should not, however, be perfectly correlated or very highly correlated. If they are highly correlated, it suggests the measures are completely redundant and combining them – particularly when combining them with other, less correlated measures – over-weights these measures.

Examination of both the original and DellaPergola’s transformed data indicate that some of the indicators are completely unrelated. There are also indicators that are strongly negatively related, which should not be the case if all data were transformed such that higher values indicate greater neediness. For example, the Aging Ratio and the Age Dependency Ratio are unrelated to the other two indicators on the Total Demography Index, Gender Inequity and

⁵² See Booyesen 2002, Salzman 2003 at note 43 for reviews, as well as Babbie, E.R. *The Basics of Social Research*. Wadsworth. 2001.

Recent Jewish Immigration Load ($r=-.135$, $p=.182$; and $r=-.073$, $p=.471$, respectively). The correlation of PPPI is strongly negatively related to all of the indicators, except the Aging ratio with which it exhibits no relationship, and Recent Immigration Load with which it is positively related.⁵³

SCALING ISSUES

The use of linear scales may not be appropriate for all the indicators used in this model. In addition to indicators showing some degree of inter-relationship, all of the indicators should be scaled similarly. All of the indicators included in DellaPergola's formulation assume simple linear scales. That is, it was assumed that for each measure a unit change at one end of the scale is equivalent in degree of neediness to a unit change at the other end of the scale. Such an assumption, particularly with indicators of deprivation, may be unfounded. In the development of the HDI, for example, variables such as unemployment, literacy and percent of population living below poverty are distributed differently in developed economies compared to undeveloped economies. Thus, to combine these indicators with other measures of deprivation, non-linear transformations of the data are applied (e.g., logarithm).⁵⁴ Greater consideration should be given to assumptions about scaling associated with the indicators of neediness in the development of the TNI.

Multiple indicators show very little variation over the regions examined in this report and are therefore not useful for differentiating regions in terms of neediness. There are five indicators included in DellaPergola's TNI estimates that show very little variation over the geographical regions reported. These are: access to improved sanitation; the aging ratio; the GINI coefficient of income distribution; the percent unemployment; and the gender equity measure. The small variation in these indicators may be due in part to the techniques used to standardize the raw data (a topic addressed later), but if the indicators are properly standardized and the variation is very small, then it suggests the measures are not useful for differentiating regions in terms of neediness.

There are some issues associated with the method of standardizing values on individual indicators. When developing an index that is a composite of multiple indicators, standard practice is to standardize units of analysis. This is most important when the individual indicators are measured on very different units (e.g., dollars vs. years vs. 0 to 1 scales). The reason for scaling "is to point out the relation among certain objects, how far apart they are and in what direction they lie relative to each other".⁵⁵ If standardization is not done on indicators that have different data ranges, "composite indices will be biased towards variables with high ranges and meaningful changes in a value [in an indicator with a low range] may insignificantly affect the composite index."

DellaPergola employs a form of standardization, by transforming all of the original data such that they are on scales that range from 0 to 1. The method, however, is insufficiently described for us to be able to replicate his results. Part of his method appears similar to the

⁵³ See Babbie 2001 at note 52 for review of correlational properties of index and scale construction.

⁵⁴ See, Salzman. 2003, p. 10. Anand & Sen. 1994, 2000 at note 43.

⁵⁵ Booyesen 2002 at note 43.

Linear Scaling Technique (LST) described by Booyesen.⁵⁶ In this technique, typically, each individual measure is standardized by examining how much it deviates from some reference point on the scale (e.g., minimum value) relative to some expected observable range of values. DellaPergola employs a variation of this technique in which the observed value is simply divided by the maximum value on the scale. This is sometimes used in situations in which the range of the scale is so large that examining deviations based on the range would obscure differences between points on the scale.

To transform the data such that each country's neediness score is divided by the highest neediness score so that the highest score equals 1, results in the score itself no longer representing some metric of neediness, but instead representing each country's "standing" relative to the most needy country; that is, it becomes a version of a rank score. That such a measure does not represent an absolute measure of neediness is indicated by the fact that any given country's score would change if the neediness of the worst country changed. No changes need occur in a country of interest for its neediness score on this index to change. It is relatively common for indices to provide information on relative standing rather than absolute measures of a construct. One needs to be clear, however, on what the data represent in order to evaluate inferences drawn from such measures. DellaPergola seems to maintain that the measure provides an absolute measure of neediness and that relative standing is irrelevant, yet his methods of standardization as well as measurement seem to contradict this. Not only are his own measures based on a country's score relative to others, but some of the indicators on which he relies, such as the gender equity measure of the HDI, are described by those who constructed them as not suited for assessing absolute levels of development and instead indicate where a country stands relative to the development goals proposed by the UN. Further, it is unclear that the variation of the LST method DellaPergola employs is the best method in this context. Other linear scaling methods that maintain information about both the score of an individual country relative to other countries as well as how spread out the values are across countries (range/variance) may be desirable. We consider one such alternative approach, using z-scores, in a later section.

WEIGHTING: COMBINING INDICATORS

Beyond standardization and choosing indicators that all measure the same underlying construct of neediness, several factors must be considered in the methods used to combine the indicators into a single index or measure. Indicators can be combined arithmetically, as done in the development of the TNI, whereby individual indicators are summed and averaged. This is not the only method by which measures can be combined. One can employ "power averaging" or multiplicative averaging, each of which would entail consideration of different sets of assumptions about the assessment of neediness.⁵⁷

⁵⁶ LST values are typically calculated as follows:

If an increase in a value in the unstandardized data indicates an increase in what one is trying to measure and if the raw data value to be transformed is X, then the transformed value is:

$$\frac{X - \text{Minimum value in the raw data}}{\text{Maximum value} - \text{Minimum value}}$$

Thus, when X is the minimum value, the numerator becomes 0 and the transformed value is 0. When X is the maximum value, the numerator becomes the same as the denominator and the transformed value is 1.

⁵⁷ Booyesen 2002; Salzman. 2003 at note 43

In any of the combination methods employed, issues associated with weighting need to be considered. One issue is whether regional estimates are appropriately weighted such that smaller countries do not contribute to the overall estimates disproportionately relative to their size. The second issue is the weighting that is given to individual indicators as they are combined/aggregated into a single index.

- **Individual indicators must be weighted to reflect their influence on the final index**
- **All indicators must be weighted so that regional estimates reflect accurately the influence of individual countries that comprise the region**

One of the indicators in the DellaPergola model has been given a greater weight than other indicators. It is reported that each of four indices (the TDI, THI, TSI & PPPI) are given equal weight in the calculation of the TNI. This is not directly the case. The PPPI is comprised of only a single indicator, whereas the TDI, THI, and TSI each consists of four indicators. The consequence is that the TNI, though described as an index comprised of 4 sub-indices, is effectively a single index comprised of 13 individual indicators. The act of combining 12 of the indicators into three separate measures before combining them with the PPPI measure results in the PPPI measure – the only index that shows significantly more neediness in North America and Israel than in the Former Soviet Union/Eastern Europe – weighted 4 times the other 12 indicators. The point is essentially moot, since PPPI does not indicate neediness and should not be included on the index at all. The lack of attention, however, to such weighting issues, leads one to question overall the soundness of the methods employed.

There is a question whether national statistics should have been weighted by each country's Jewish population in order to assess the neediness of Jewish Nazi victims. All indicators in the TNI are also weighted by the estimated 2003 Jewish population. Nearly all of these indicators, however, are national statistics, and, thus, are based on the entire national population. To weight by Jewish population requires an assumption that the characteristics of the Jewish population are the same as the nation as a whole – that there are no significant differences between the Jewish population and the national population on any of the indicators. This seems an unlikely assumption, particularly for regions such as the United States where the Jewish population is 2% of the entire population.

When estimating regional averages in indicators (i.e., combining across individual countries to estimate values for a region), one must take into account the size of each country included in the estimate so that smaller countries do not contribute disproportionately to the estimate for the region. Thus, those indicators that are based to the total population should be weighted by total population when combined into regional estimates.

The rationale provided for weighting by Jewish population is that the Jewish population is the appropriate frame of reference for inferences about Jewish Nazi victims. Such an assumption confounds the need to disaggregate national statistics because they do not reflect the characteristics of small sub-populations with the need to weight so that data can be com-

bined across regions that vary in size. The method of weighting in this context results in the regional estimate no longer reflecting neediness, but instead, a function of the size of the Jewish population. How to address the fact that the national statistics do not provide accurate assessments of the Jewish population, or more directly assessments of the Jewish Nazi victim population, can only be addressed by obtaining sub-population specific data.

IIB3. SUMMARY OF CONCEPTUAL AND METHODOLOGICAL ISSUES WITH THE NEEDINESS INDEX

The centerpiece of the allocation methodology proposed by DellaPergola is the construction of a single index to capture the relative neediness of Jewish Nazi victim populations in countries around the world. This index uses 13 indicators clustered in 4 domains (demographic, health, socioeconomic, and purchasing power) as a basis for this task. In this section, we have assessed this index with respect to the relevance of the chosen indicators to neediness in the Jewish Nazi victim population, the methodological considerations that must be taken into account in choosing indicators, and the methodological issues (scaling and standardization, weighting and aggregation) associated with transforming multiple indicators to a single summary measure. Our conclusion is that there are important questions and reservations regarding each of these issues.

The author champions the method as one that reflects the multivariate nature of the data. The multivariate nature of the data, however, is precisely what undermines the interpretation of the index. If one is given the information that a country has a Total Neediness Index of .6, what does this mean? One knows little to nothing about the neediness of the country, aside from the fact that at least one of the indicators included in the measure must be at least equal to or greater than .6. Which of those measures it might be, whether the country is equally distributed at .6 across all measures, whether it is higher on one measure and lower on the others, cannot be determined from knowing the value itself. The value itself provides no useful summary information.

It reminds the reader of the classic example, illustrated by the former US Secretary of Labor, Robert Reich, in his description of average tax cuts that average across no cuts among the lower and middle classes and large tax cuts among the wealthy: “The average height of me and Shaquille O’Neal is 5 foot 10 inches.” That a population of the less than tall Bob Reichs and gargantuan Shaquille O’Neals would be equated with a population of average sized Joes because both populations yield the same Total Height Index would result in policies that completely miss the height needs of the Reich population. As is true of certain tax cut proposals, and as is true for most of the averaging of indices represented in this report, combining across disparate sources of information (both in terms of measures and in terms of sub-populations within those measures) provides little information with which to make informed policy decisions.

As an illustration of the effect that some of these issues may have on the assessment of neediness, we provide in the next section examples of what suggested allocations would look like if some of the issues identified above were taken into account. ***We emphasize here that we are not advocating the allocations derived in these analyses, nor the use of the index. Rather the aim is to show how sensitive outcomes are to assumptions and methods.***

III. EXAMINATION OF TNI AND TRA UNDER DIFFERENT ASSUMPTIONS

Given the number of different conceptual and methodological decisions that can affect the results associated with the TNI, we examined how conclusions might differ if one were to make different assumptions about the data. Specifically, we explore the original raw data on which the TNI and TRA formulations are based and employ different methods of standardizing indicators and weighting the estimates to examine the effects on allocation decisions. The primary goal of these analyses is to understand the inter-relationship among measures and how best to combine them in a way that is easily replicable and consistent with standard practices.

Standardization

Because the original data are scaled on very different units of measure, we standardized all indicators by converting them to standard-normal scores (z-scores).⁵⁸ This method was employed because it is based on as much of the distributional properties inherent in the original data as possible.

In addition, DellaPergola's hypotheses about the nature of the relationship between each index and the estimation of neediness suggested that several of the measures should be reverse-scored such that for all indicators, higher values indicate greater neediness.⁵⁹ The indicators that required reverse-scoring were:

- *Gender Equity*: The UNDP measure of gender equity is scored such that higher values indicate greater equity for women. As a measure of neediness, this index, thus, needs to be reversed such that higher values indicate less equity.
- *Life Expectancy*: Original data in terms of average life expectancy at birth in years is scored such that the higher the life expectancy, the lower the estimated neediness. Thus, this variable was reverse scored so that higher values indicated greater need.
- *Health Expenditures*: Original data is scored such that the greater the estimated public and private expenditures on health in dollars, the lower the neediness. This item was reverse-scored so that higher values indicate greater neediness.
- *Access to Improved Sanitation*: Higher values on the Sanitation Index indicate lower values of neediness. This indicator was reversed so that higher values indicate greater neediness.
- *Access to Affordable Drugs*: Higher values on this index indicate lower neediness. Thus, the original scale was reversed so that higher values indicate greater need.
- *GDP*: The greater the GDP, the less the neediness of a country. Thus, this indicator was reverse-scored so that higher values indicated greater neediness.
- *Jewish Social Status*: The greater the estimated percentage of Jews with higher education degrees, the less needy the population was estimated to be. This indicator was, therefore, also reverse-scored.

⁵⁸ Z-scores are obtained by dividing deviations of individual country values from the midpoint of the distribution (the mean) by a measure of the variance, such that all values are expressed in terms of the number of standard deviations each country is from the average value on that index. Z-scores range from negative to positive infinity, with 97% of the scores typically ranging between -1.96 and +1.96. A high positive value indicates greater neediness, whereas a high negative value indicates the least neediness.

⁵⁹ Reverse-scores were obtained by multiplying the z-transformed values by a factor of -1.

The DellaPergola estimates along with the standard normal scores for each region are displayed in Table 8, which includes data for each indicator as well as the composite indices of Total Demography Index, Total Health Index, and Total Socioeconomic Index. Through analysis of the original raw data, we are able to separate estimates of neediness in the FSU countries from those in the other eastern European countries, which DellaPergola combines. Thus, the table includes the estimates for regions as defined by DellaPergola, as well as separate estimates for FSU alone. In many instances, the other eastern European countries are better off than the FSU countries; thus, combining them gives the appearance that the FSU countries are better off (i.e., less needy) than they are if one examines the two regions separately.

If one examines the raw data (weighted by national population for regional estimates), one would draw different inferences than those drawn from DellaPergola's estimates, which are weighted by total Jewish population. For example, DellaPergola's estimate of Gender Inequity suggests that the ordering of regions/countries from worst to best is FSU, other countries, Israel and North America; whereas, the weighted raw data indicate that other countries exhibit lower levels of gender equality than the FSU. Our z-transformation maintains the relative rankings in the original data. Thus, we can be certain that inferences drawn about differences in regions is attributable to differences in their level of neediness and not to differences in the size of their total Jewish population or other factors associated with the transformation functions that are applied to the original data in his framework.

A benefit of examining the standardization in terms of Z-scores is that they provide information on relative standing (which countries appear worse off than others) as well as on the magnitude of the differences between the regions, since they maintain properties of how spread out the original scores are. One can see that the high score for Israel is explained almost entirely by the exceedingly high estimate of recent Jewish immigration load relative to the other countries. DellaPergola reports that Recent Immigration Load is a measure of the percentage of recent Jewish immigrants relative to the total Jewish population within a country. Given our questions about whether this indicator represents neediness, we estimated Total Demographic Neediness omitting this one indicator. When one excludes this measure, the other demographic indicators of neediness when combined suggest that rather than Israel appearing most needy, it is instead the least needy of all of the regions.⁶⁰

Health indicators result in a reversal of scores for the FSU and other countries when one compares the original raw data to the DellaPergola estimates. Analyses of original socioeconomic indicators also yield different patterns of results than those estimated by DellaPergola.

⁶⁰ One could similarly calculate the TDI based on patterns of correlations, dropping indicators that show no relationship with other indicators. This would leave the Gender Inequity measure as the only indicator of the TDI.

TABLE 8:
NEEDINESS INDICATORS, DELLA PERGOLA ESTIMATES, ORIGINAL DATA, AND STANDARDIZED SCORES

<i>Demographic Indicators</i>	DellaPergola Estimates ^A					Original Data ^B				Standardized Estimates ^B					
	Aging Ratio	Age Depend	Gender Equity	Immigration	TDI	Aging Ratio	Age Depend	Gender Equity	Immigration	Aging Ratio	Age Depend	Gender Equity	Immigration	TDI	TDI ^C
Israel	0.786	0.303	0.412	0.800	0.807	0.459	0.246	0.900	0.040	-0.223	-1.115	-0.862	4.514	0.579	-0.733
FSU & East Europe	0.804	0.900	0.543	0.200	0.858	0.475	0.644	0.772	0.010	0.003	1.520	0.045	-0.361	0.302	0.528
North America	0.886	0.365	0.375	0.400	0.710	0.518	0.297	0.935	0.020	0.629	-0.778	-1.110	1.264	0.001	-0.420
Other	0.846	0.462	0.431	0.352	0.733	0.479	0.360	0.691	0.011	0.068	-0.363	0.615	-0.248	-0.090	-0.026
Israel						0.459	0.246	0.900	0.040	-0.223	-1.115	-0.862	4.514	0.579	-0.733
FSU						0.457	0.721	0.765	0.010	-0.259	2.029	0.094	-0.361	0.371	0.619
Other East Europe						0.502	0.527	0.782	0.010	0.401	0.746	-0.029	-0.361	0.196	0.392
USA						0.517	0.297	0.935	0.020	0.622	-0.777	-1.110	1.264	0.000	-0.422
Canada						0.522	0.295	0.934	0.020	0.695	-0.790	-1.103	1.264	0.016	-0.399
Other						0.479	0.360	0.691	0.011	0.068	-0.363	0.615	-0.248	-0.090	-0.026
<i>Health Indicators</i>	Life Expect	Health Expend.	Sani.	Drugs	THI	Life Expect	Health Expend.	Sani.	Drugs	Life Expect	Health Expend.	Sani.	Drugs	THI	
Israel	0.529	0.483	0.120	0.250	0.375	78.900	2338	100.000	4.000	-0.931	-1.547	-0.607	-0.995	-1.020	
FSU & East Europe	0.657	0.918	0.141	0.662	0.645	69.319	352	94.710	2.580	0.138	0.566	-0.333	0.402	0.186	
North America	0.552	0.034	0.120	0.250	0.269	77.126	4306	100.000	4.000	-0.733	-3.640	-0.607	-0.995	-1.494	
Other	0.570	0.605	0.161	0.388	0.467	67.856	472	54.740	2.390	0.301	0.438	1.738	0.588	0.768	
Israel						78.900	2338	100.000	4.000	-0.931	-1.547	-0.607	-0.995	-1.020	
FSU						67.839	289	97.740	1.990	0.303	0.633	-0.490	0.983	0.357	
Other East Europe						71.703	455	90.110	3.480	-0.128	0.457	-0.095	-0.481	-0.074	
USA						76.900	4499	100.000	4.000	-0.708	-3.846	-0.607	-0.995	-1.539	
Canada						79.200	2534	100.000	4.000	-0.964	-1.755	-0.607	-0.995	-1.080	
Other						67.856	472	54.740	2.390	0.301	0.438	1.738	0.588	0.768	
<i>Socioeconomic Indicators</i>	GDP	GINI	Jewish Social Status	Unem- ployment	TSI	GDP	GINI	Jewish Social Status	Unem- ployment	GDP	GINI	Jewish Social Status	Unem- ployment	TSI	TSI ^D
Israel	0.645	0.502	0.819	0.173	0.611	19790	35.500	30.000	10.400	-0.802	-0.332	1.558	-0.257	0.042	-0.464
FSU & East Europe	0.883	0.533	0.444	0.123	0.567	6578	36.625	44.820	10.470	0.498	-0.225	-0.480	-0.251	-0.098	0.035
North America	0.384	0.568	0.370	0.086	0.402	33614	39.886	54.510	5.260	-2.163	0.085	-1.813	-0.751	-1.161	-0.943
Other	0.642	0.562	0.589	0.183	0.565	6834	41.130	38.110	10.710	0.473	0.203	0.442	-0.227	0.448	0.172
Israel						19790	35.500	30.000	10.400	-0.802	-0.332	1.558	-0.257	0.042	-0.464
FSU						5704	38.390	51.290	8.040	0.584	-0.057	-1.370	-0.483	-0.328	0.020
Other East Europe						7984	33.717	35.000	14.070	0.360	-0.502	0.870	0.096	0.251	0.057
USA						34320	40.800	55.000	5.000	-2.233	0.172	-1.881	-0.776	-1.179	-0.945
Canada						27130	31.500	50.000	7.600	-1.525	-0.713	-1.193	-0.526	-0.989	-0.921
Other						6834	41.130	38.110	10.710	0.473	0.203	0.442	-0.227	0.448	0.172

A. These data are as reported by DellaPergola in Appendix 3 "Raw Data for Appendixes 1 and 2". B. Estimates for FSU and E. Europe, N. America and other countries are weighted by total population within each country so that smaller countries do not contribute greater weight to the regional estimates (Regional Weight w_i = country total population/ Σ (total pop. of each country in region)). C. Estimate of Total Demographic Neediness omitting Recent Jewish Immigration Load. D. Estimate of Total Socioeconomic Neediness omitting Jewish Social Status

Combining Indicators to Determine Total Neediness

Total Neediness was estimated by averaging across the standardized indicators of neediness (see Table 9), yielding very different conclusions about the distribution of neediness across the regions than those estimated by DellaPergola. While Israel appears most needy in the DellaPergola estimates, using the original data, standardizing and averaging across the individual indicators of neediness (TNI 1), other countries appear most needy, with FSU and other Eastern European countries coming second, followed by Israel, and then North America. When one separates estimates of neediness in the FSU from other Eastern European countries, the FSU countries appear most needy, needier than other countries. When one excludes measures such as recent immigration load (TNI 2), the differences between the FSU and other countries, as well as between the FSU and Israel are even more dramatic.

TABLE 9: TOTAL NEEDINESS ESTIMATED BY DELLA PERGOLA, AND BASED ON STANDARDIZED ESTIMATES OF ORIGINAL DATA			
	TNI DP ¹	TNI 1 ²	TNI 2 ³
Israel	0.815	-0.353	-0.739
FSU & Other East Europe	0.784	0.277	0.250
North America	0.695	-0.940	-0.952
Other	0.789	0.371	0.095
Israel		-0.353	-0.739
FSU		0.380	0.332
Other East Europe		0.120	0.125
USA		-0.961	-0.969
Canada		-0.747	-0.800
Other		0.371	0.095

Notes: 1. TNI DP: TNI Estimated by DellaPergola
 2. TNI 1: TNI Estimated using z-transformed original data included in the DellaPergola index.
 3. TNI 2: TNI estimated using original data used in the DellaPergola index, excluding questionable indicators of Jewish immigration, Jewish Social Status, and the PPP/GNI ratio

How does Total Neediness Index as estimated via standardized scores translate to decisions about percent allocations?

DellaPergola uses the Total Neediness Index to propose how available resources could be distributed – in terms of percent distributions to the various regions.⁶¹ When one multiplies the total number of survivors in a region by the index of neediness, one generates an estimated number of survivors in need, which is then summarized in terms of the percent of all needy survivors in each region. Such an application of the TNI seems problematic, given that the index represents a country’s relative standing and does not appear to represent the percentage of

⁶¹ DellaPergola. 2004 at note 3, p.41 Table 8.

survivors in need whatsoever. The method of combining them in this way is also problematic because each of the two variables (neediness and population size) are measured on dramatically different scales with neediness on a scale that ranges from 0 to 1 and population size on a scale in the hundreds of thousands. The result is that the proposed distribution is almost completely determined by the variable that has the greatest scale, population size.

Like DellaPergola’s proposed measure of neediness, the measure of neediness generated using Z-scores represents a country’s relative standing – whether it is more or less needy in comparison to other countries and not the percentages of individuals within a country that are needy. Thus, inferences about percent distributions to be allocated are not straightforward. One can, however, consider the information conveyed by the index, and propose an allocation method that distributes funds proportional to the differences observed in levels of neediness estimated by the index. For example, when one analyzes the z-transformed data, Israel is 41% better off (according to these macro-level measures) than the FSU; the United States is 72% better off than the FSU; and, other countries are 6% worse off than the FSU (see Table 10).

Table 10: Converting Z-scores to Allocation Percentages								
	TNI Standardized using all DP Indicators				TNI Standardized Dropping Immigration, Social Status & PPP/GNI			
	Z	Area under curve	% Differs from FSU	% Allocated	Z	Area under curve	% Differs from FSU	% Allocated
Israel	-0.353	0.362	.406	20	-0.739	0.230	.616	15
FSU+East Europe	0.277	0.609	0	34	0.250	0.599	0	39
North America	-0.940	0.174	.715	10	-0.952	0.171	.715	11
Other	0.371	0.645	-.058	36	0.095	0.538	.102	35

One could allocate such that the distribution of the 100% of total resources maintains the same percentage differences between regions (see Figure 1). DellaPergola’s analysis yields a proposed 48% of total resources allocated to Israel, 17% to the FSU and Eastern European countries, 15% to North America, and 20% to other countries (see Figure 1). Using the same indicators as DellaPergola (ignoring questions as to whether these are in fact appropriate indicators of neediness of Jewish Nazi victims), but combining them in a way that does not confound neediness with population estimates, yields very different conclusions. Based on the proposed macro-indicators of neediness alone, a greater percentage would be allocated to the FSU and other countries than to Israel.

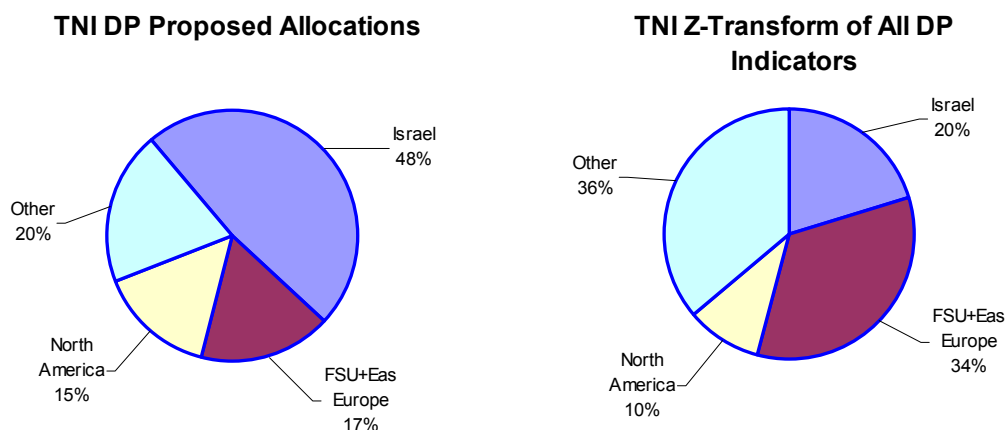


Figure 1. Comparison of DellaPergola’s proposed allocations with allocations based on z-transformed original data on which the DellaPergola estimates were based.

This is not to say that a review of all available evidence suggests that these are the recommended allocations. Indeed, as should be evident from our analysis thus far, the indicators included in this exercise are a far cry from all available evidence and are questionable as to whether they are at all useful as indicators of neediness for this specific population. The intent with these analyses is to demonstrate how, were one to accept the neediness indicators as is, the inferences drawn from analysis of these do not comport with the inferences DellaPergola suggests. Clearly, his analysis is driven by population estimates and other transformations on the data than on a straightforward analysis of neediness.

Weighting by Nazi Victim Population

In the above re-analyzed allocation scenario, the estimated percentages allocated to different regions do not at all take into account the size of the survivor population within each region. Some of the most needy countries included in the “other” category, are countries that have very few estimated Nazi victims (e.g., Ethiopia, Zimbabwe). Thus, in terms of drawing inferences about distributing not just across regions, but across the distribution of Nazi victims, one could take into account the size of the Nazi victim population within a region.

DellaPergola attempts to take the size of the victim population into account by multiplying the victim population of each region by the need index. Such an algorithm, however, with population estimates on very different scales than the neediness indicator, results in total neediness no longer representing the neediness of a region, but instead representing the total population of victims.

For the sake of illustration, we took another approach to account for the size of the victim population. We weighted the index of Total Neediness by the victim population in each country (see Table 11).⁶² Doing so results in total neediness of other countries declining

⁶² Survivor weight, $w_s = \# \text{ survivors in country} / \Sigma(\# \text{ survivors in all countries})$. For these calculations we used DellaPergola’s estimates of the survivor population in each country. These estimates result in a greater allocation to Israel than other estimates of the survivor population. For regional estimates, the region weight was multiplied by the survivor weight to create a total weight. Alternative methods of weighting by survivor population could be considered so that even greater weight is given to those countries in which most survivors live.

greatly compared to the FSU (see Figure 2). If one omits immigration load, Jewish social status and the PPPI measures, the percentage allocated to FSU and Eastern Europe increases to 50%.

TABLE 11: STANDARDIZED TNI MEASURES WEIGHTED BY SURVIVOR POPULATION								
	TNI using all DP Indicators				TNI Dropping Immigration, Social Status & PPP/GNI Area			
	Weighted Zscore	Area under curve	%Differs from FSU	% Allocated	Weighted Zscore	Area under curve	%Differs from FSU	% Allocated
Israel	-0.353	0.362	0.434	25	-0.739	0.230	0.647	17
FSU+Eas Europe	0.358	0.640	0	43	0.391	0.652	0	50
North America	-0.959	0.169	0.736	11	-0.967	0.167	0.744	13
Other	-0.516	0.303	0.527	21	-0.651	0.258	0.605	20

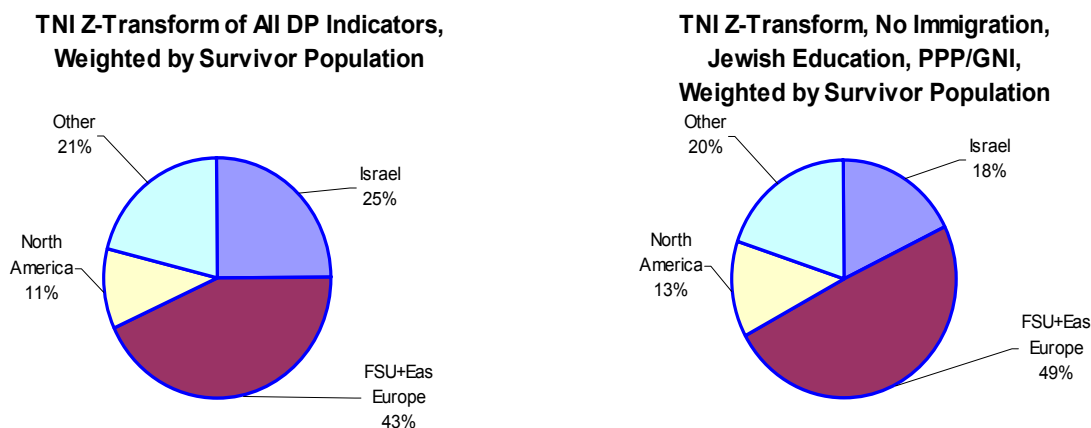


Figure 2. Comparison of allocations based on TNI estimated via z-transformations, and weighting by the victim population within each country/region.

All of these calculations are intended to exemplify the dramatic changes in conclusions one might draw depending on decisions about how best to design an index to reflect the underlying constructs of interest, neediness. Solutions depend on the choice of measures that are included on the index, as well as choices about how best to handle the data. The analyses described above provide example of the influence these factors can have on the conclusions that might be drawn from such an algorithmic approach. They are in no way intended to provide an alternative proposed allocation plan. The examples demonstrate the unreliability of the formulaic solution.

IV. CONCLUSION

The development of a neediness-based decision model for the determination of how best to distribute funds that will be available under the Swiss Banks Settlement is a difficult undertaking. Any such model is highly dependent on a number of unknowns. The precise number of victims in any given region is unknown, as is the true neediness of those victims. Thus, implementation of a decision-model requires a number of assumptions and estimations about these unknowns.

DellaPergola, in his development of the “Key to Global Resource Allocation”, attempts to examine neediness in a way that allows for inferences to be drawn about the relative neediness of victims in some regions compared to others. His measure of neediness relies exclusively on macro-social indicators. Yet, DellaPerogola notes that “the surviving population cannot be considered as one homogeneous constituency, neither in terms of past personal experiences of discrimination, sufferance and deprivation, nor in terms of current personal standard of living, available resources, and neediness.” Given this fact, attempts to reduce the diversity of information sources used to describe this disparate population into a single measure are highly problematic. The difficulty is not only conceptual, but also technical and the model is dependent on a number of statistical assumptions. Finally, the proposed allocations are determined almost entirely by the distribution of the number of victims, about which strong disagreement persists.

The review suggests that more direct measures of neediness are necessary. Although our analyses do not preclude formulaic solutions and the use of macro-indicators, present proposals for including such information do not meet applicable standards of objectivity. Greater meaning would be obtained by a more straightforward report of all relevant data (micro- and macro) and a multivariate analysis that models the dimensions of demographics, health, social and economic indicators. Any analysis requires balancing the strengths and limitations of various sources of data, and an acceptance that, in the end, such diverse sources of evidence might not be easily summarized into a single, formulaic decision process.

As indicated by the recent *Special Master’s Recommendation for Allocation of Possible Unclaimed Residual Funds*,⁶³ it is still not possible to determine how much funding will be available to victims. Thus, the Special Master’s recommendations are in terms of priorities, rather than percentages or dollar amounts. This seems a reasonable and appropriate approach and not one that is a matter of dispute by social scientific arguments. Would that sufficient funds were available to fund all needs and that the dignity of victims could be assured, wherever they live, then the present debate would be superfluous. To the extent that these needs have not been addressed, how shameful that the world – which remained mostly silent and stunningly incapable of acting during the Nazi reign of terror – has not seen fit to address these needs.

⁶³ J. Gribetz & S. Reig, *In re: Holocaust Victims Assets Litigation. Special Maters Recommendations for Allocation of Possible Unclaimed Residual Funds*. April 16, 2004.

RESEARCH TEAM

The report was developed by researchers at Brandeis University. Key staff for the present project are affiliated with the University's Heller School for Social Policy and Management, a graduate school whose core mission is "Knowledge Advancing Social Justice." The report was a joint effort of the Maurice and Marilyn Cohen Center for Modern Jewish Studies and the Institute for Sustainable Development.

MAURICE AND MARILYN COHEN CENTER FOR MODERN JEWISH STUDIES

The Maurice and Marilyn Cohen Center for Modern Jewish Studies at Brandeis University is a multi-disciplinary research center dedicated to bringing the concepts, theories, and techniques of social science to bear on the study of modern Jewish life. Research conducted at the Center explores how contemporary Jewish identity is shaped and how Jewish culture and religious practice are manifested. Recent studies have focused on issues such as Jewish education, family life, intermarriage and the role of synagogues, camps and Israel programs. The Center is currently the host of the North American Jewish Data Bank. Faculty at the Center include psychologists, sociologists, and Judaic Studies experts, along with methodologists and policy analysts. The Center is a unit of the University's Philip W. Lown School of Near Eastern and Judaic Studies.

THE INSTITUTE FOR SUSTAINABLE DEVELOPMENT

The Institute for Sustainable Development (ISD) is part of the Heller Graduate School. The Institute was established in 2000 as the home to several research and development centers that share the goal of alleviating the conditions which give rise to persistent poverty and mining lessons that cross national borders, that is, finding solutions that are inspired by both American and international experience. The Institute engages in education, training, and scholarship. In addition, ISD both develops and evaluates social programs and social policy solutions throughout the world.

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