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## COMBINING HAPPINESS AND SUFFERING IN A RETROSPECTIVE VIEW OF ANCHOR PERIODS IN LIFE: A DIFFERENTIAL APPROACH TO SUBJECTIVE WELL-BEING

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**ABSTRACT.** The intersection of dimensions of subjective well-being (SWB) generates *SWB types*. We delineated SWB types by cross-tabulating happiness and suffering ratings that participants attributed to outstandingly meaningful periods in their life referred to as *anchor periods*. A sample of 499 older Israelis (age 58–94) was queried about two positive periods (the happiest, the most important) and two negative periods (the most miserable, the most difficult). A variety of variables discriminated between the more frequent *congruous* types of *Happy* (high happiness and low suffering) and *Unhappy* (low happiness and high suffering), but also presented the *incongruous* types of *Inflated* (high happiness and high suffering) and *Deflated* (low happiness and low suffering) as discriminable. Thus, women were more likely to be *Inflated* whereas men were more likely to be *Deflated*; low education related more to *Happy* in the happiest period and to *Unhappy* in the negative periods; present life satisfaction related more to *Happy* than to *Unhappy* in the positive, but not in the negative, periods; and Holocaust survivors were more likely to be *Deflated* and *Unhappy* in the negative, but not in the positive, periods. The study supported a differential perspective on SWB within people's narratives of their lives.

**KEY WORDS:** happiness, life narrative, psychological types, subjective well-being, suffering

### 1. INTRODUCTION

Subjective well-being (SWB) broadly refers to personal evaluations that people make about their quality of life. It is a multidimensional construct involving affective, cognitive and temporal components (Diener, 1984). Positive affect (PA) and negative affect (NA) are the key emotional dimensions of SWB, indicating a person's happiness by their relative dominance (Bradburn, 1969). At the cognitive level, long-term judgments of one's life determine the degree of life-satisfaction, which reflects the discrepancy between aspirations and the currently perceived situation (Andrews and Withey, 1976; Campbell et al., 1976). Finally, SWB evaluations can refer to life in the past, the present or the future, and thus are

bound up with a person's time perspective (Cantril, 1965; Shmotkin, 1991). Researchers have typically designated SWB as an indicator or an outcome of a host of antecedent factors such as social positions, personality dispositions, benign and stressful situations, emotional arousal, goal-directed behaviors and cross-cultural diversity (for reviews, see Diener et al., 1999; Kahneman et al., 1999; Lent, 2004).

Along with this dominant line of research, there have been growing concerns over the limitations as well as contributions of SWB in larger frameworks of mental health (Jahoda, 1958), the overall quality of the "good life" (Veenhoven, 2000), and positive human functioning (Ryff, 1989; Ryan and Deci, 2001). Such works demand more elaborate, yet more precise, understanding of the interrelations of SWB with other faculties of well-being as well as with various forms of languishing in life (Keyes, 2003; Keyes et al., 2002).

In this context, Shmotkin (2005) has proposed a theoretical formulation addressing SWB as a dynamic system that constitutes a favorable psychological environment in the face of adversity. People need SWB to counteract, as well as to complement, their *hostile-world scenario*, which embodies images of actual or potential threats to one's life or integrity. With this regulatory role, SWB operates in various psychological modules: the private domain of self-awareness (experiential SWB), the public domain of self-reports (declarative SWB), the synchronic interaction among dimensions of the self (differential SWB) and the diachronic trajectories underlying one's life story along its time axis (narrative SWB). According to this conceptualization, the dynamic function of SWB and its modularity explain the multiple, and often contradictory, appearances of SWB.

This study seeks to examine how multiple modes of SWB appear within individuals' constructions of their life story. From the viewpoint of the aforementioned theoretical formulation, the study addresses a major manifestation of differential SWB, namely *SWB types*, which ensue from specific combinations among SWB constituents (see next). The current investigation inspects these types within a basic ingredient of narrative SWB, namely *anchor periods*, which refer to specific periods of outstanding meaning in one's life (see below). We presumed that the variability of SWB (as reflected by SWB types), when interwoven with evaluations of the past (as reflected by anchor periods in life), may have important implications for mental health and coping with developmental tasks, particularly among older people.

### 1.1. *SWB Types*

The concept of SWB types was presented by Shmotkin (1998, 2005) in order to designate different modes of organizing SWB dimensions within the self. This typological model derived from the intersection of the following pairs of SWB dimensions: PA and NA, which constitute the emotional components of SWB; affect balance (according to Bradburn's [1969] formula of PA minus NA) and life satisfaction, which respectively represent emotional and cognitive formations of SWB; and self-evaluations of one's present and future (or, alternatively, past), which refer to the temporal coordinates of SWB. By cross-tabulating those pairs of dimensions, Shmotkin (1998) distinguished between *congruous types*, in which one's positions on the SWB dimensions converge so that SWB is either high or low according to both dimensions (e.g., the type having high PA with low NA, or low PA with high NA), and *incongruous types*, in which one's SWB is high according to one dimension but low according to the other (e.g., the type having high PA with high NA, or low PA with low NA). Preliminary validation of this typological model was found by Shmotkin (1998) in a life-span sample. Expectedly, a correlation between the cross-tabulated SWB dimensions (e.g., between affect balance and life satisfaction) increased the proportion of cases in congruous types. Nevertheless, the incongruous types appeared viable in terms of their proportion among respondents and the implications that they bore. Variables that produced significant differentiation between types were typically health, marital status, economic status, and education. These findings showed that SWB types could be empirically detected and characterized.

The notion of SWB types was initially suggested by McKennell (1978), who cross-tabulated happiness and satisfaction-with-life ratings. He found that high happiness with low satisfaction were typical of younger adults whereas low happiness with high satisfaction characterized older adults. Proposing another well-being typology, Keyes et al. (2002) distinguished SWB, referring to a composite of self-evaluations regarding life satisfaction, positive and negative affect, from psychological well-being (PWB) referring to self-perceived engagements with essential life challenges such as self acceptance, environmental mastery and purpose in life (Ryff, 1989). Cross-tabulating high and low levels of SWB and PWB, Keyes et al. (2002) delineated well-being types contoured by sociodemographic and personality factors. For example, the combination of low SWB with high PWB was typical of younger adults with higher education whereas high SWB with low PWB was typical of older adults with lower education. Also, having high

levels of both SWB and PWB negatively related to neuroticism whereas having high PWB with low SWB positively related to openness to experience. This study shows that a differential view of well-being types reflects flexible modes of adaptation.

The SWB types investigated here parallel the positive-negative affect types in Shmotkin's (1998) study. However, PA and NA are respectively replaced in this study by *happiness* and *suffering*. While representing the respective realms of positive and negative affects, the themes of happiness and suffering presumably capture most significant emotional poles in people's conceptions of life experiences, as evident in philosophical and cultural traditions (Tatarkiewicz, 1976; Hudson, 1996). This typology includes four SWB types as presented in Figure 1.

Cells 1 and 4 in Figure 1 represent congruous types, in which there is a predominance of one kind of affect over the other, indicating a level of SWB that is either high (*Happy*) or low (*Unhappy*). Cells 2 and 3 are incongruous, characterized by either high (*Inflated*) or low (*Deflated*) levels of both affects, with no clear dominance of either affect. Thus, the *Inflated* and *Deflated* types differ in their levels of arousal (involving high versus low affects, respectively) rather than in an advantage of SWB (as both types involve opposing indications of SWB).

The congruous types reflect rather contradiction-free modes of SWB. In terms of Cacioppo et al.'s (1999) Evaluative Space Model (ESM), which integrates the interrelations between positivity and negativity in the affect system, the congruous types represent a reciprocal mode of activation, in which PA and NA tend to be mutually exclusive. The *Happy* type is likely to be considered advantageous, as its predominant positive emotions may promote personal resources and help to dismantle psychological adversity

		<i>Happiness</i>	
		Low	High
<i>Suffering</i>	High	Congruent-Unhappy (4)	Incongruent-Inflated (2)
	Low	Incongruent-Deflated (3)	Congruent-Happy (1)

Fig. 1. SWB types.

(Fredrickson, 2001). Expectedly, this type is very common because it conforms to the “positivity bias,” which is the natural tendency toward a predominance of PA (Diener and Diener, 1996; Lykken, 1999). Nevertheless, *Happy* may involve risks for both mental and physical health when it is maintained by forceful repression of negative feelings or by resorting to excessively positive illusions (Shedler et al., 1993; Taylor and Armor, 1996).

In contrast, the *Unhappy* type is obviously less favorable in terms of SWB and may increase vulnerability to depression and physical illness. However, under certain circumstances, the predominance of NA may be adaptive. Thus, negative emotions such as fear and anxiety may facilitate cognitive processing and coping in stressful situations (Schwarz and Clore, 1996; Reich et al., 2003). Also, *Unhappy* may expectedly reflect prevalent conditions where the detrimental effect of negative life experiences cannot be ameliorated by the parallel effect of positive ones (Baumeister et al., 2001; Rosin and Royzman, 2001).

The two incongruous types present more dialectic modes of SWB, which may be regarded as analogous to the coactivation (the *Inflated* type) and coinhibition (the *Deflated* type) modes in the ESM model (Cacioppo et al., 1999). *Inflated* seems to be the more conflicted type of the two, as opposing affects coexist at high levels. According to Larsen et al. (2001), although the co-occurrence of PA and NA is usually unpleasant and short-lived, it may be an effective strategy for handling emotionally complex situations. In traumatic life experiences, combining positive and negative emotions may be even more imperative for coping and recovery (Folkman and Moskowitz, 2000; Larsen et al., 2003).

The low intensities of both affects in the *Deflated* type reflect a somewhat flat emotional experience, possibly indifference, though it may also indicate a defensive inhibition, suppression, or denial of emotions. *Deflated* may indicate a “doing well” experience of avoidance in the face of threat, possibly inducing a feeling of relief or calmness (Carver, 2001). In traumatic experiences, emotional numbness is often vitally protective (Lifton, 1988). However, the suppression of feelings over time requires great mental effort, possibly hampering mental strengths and health (Schwartz and Kline, 1995; Petrie et al., 1998).

The coexistence of PA and NA in SWB types concerns the ability to synthesize inconsistent experiences. This ability is regarded as a major developmental achievement (Riegel, 1976; Labouvie-Vief, 1977; Lomranz, 1998). In this vein, Labouvie-Vief and Medler (2002) suggested two strategies for self-regulation. One is affect optimization, which is the ability to organize the environment so as to maximize positive and minimize negative

affect. This may be best demonstrated in *Happy*. The second strategy is affect complexity (also called “cognitive-affective complexity”) defined as the ability to coordinate positive and negative affect into flexible and differentiated mental structures. These structures allow for mixed positive and negative affect, as may be best demonstrated in *Inflated*. Labouvie-Vief and Medler (2002) found that affect complexity strongly related to education, known to promote reflective awareness and critical thinking. Advancing age was also a factor that facilitated emotional complexity. Thus, Carstensen et al. (2000) found older people to have higher emotional complexity in terms of differentiation between emotions as well as “poignancy,” which is the simultaneous combination of positive and negative feelings.

The foregoing conceptions suggest that SWB types are patterns of emotional adjustment and coping, each having advantages and disadvantages. Hence, these types are not to be confused with personality traits. Although SWB tends to be consistent across situations and stable across time, it is also given to situational influences (Veenhoven, 1994; Diener, 1996; DeNeve and Cooper, 1998). As similarly argued in other typological studies (Keyes et al., 2002), SWB types signify individual patterns that may flexibly adapt themselves to contextual and adaptational needs.

Most studies of SWB are engaged with people’s evaluations of their immediate present (including the last days or weeks) or else of their life in general. However, from the current viewpoint, people also recollect or reformulate their SWB in the past as well as project it onto the future. People are used, then, to generate an integrative, temporally coordinated, SWB (Ryff, 1991; Shmotkin, 1991; Shmotkin and Eyal, 2003; Staudinger et al., 2003). In this frame, the current study examines whether the concept of SWB types is applicable to individuals’ reconstruction of their past as typically manifested in their life story. As life stories unfold through periods and events, we looked for individuals’ SWB evaluations, and hence SWB types, that are characteristic of major life periods which we present next as anchor periods.

### 1.2. *Anchor Periods*

A personal narrative reflects the subjective construction of autobiographical reality (Gergen and Gergen, 1988; McAdams, 2001; Singer and Bluck, 2001). Within this perspective, the model of *anchor periods* was introduced by Shmotkin (1999, 2005) for describing *outstandingly meaningful periods* as perceived in one’s life (e.g., “the happiest period in my life,” “the most difficult period in my life”). The model posits that individuals refer to

anchor periods as markers of most significant periods, or events associated with these periods, in order to map their self-narratives. Anchor periods set valence boundaries for the evaluative space of the self-narrative, and establish a basic frame of temporal order, distances, and density of formative events. Representing paramount experiences in life, anchor periods serve as reference points with which other experiences can be compared and interpreted. The anchors constitute a skeleton that provides a heuristic outlook on one's perceived format of life, and thus provide self-narratives with a functional structure that can incorporate and support not only remembered experiences but also incoming occurrences and anticipated eventualities.

The concept of anchor periods shares certain attributes with similar notions that have been proposed in biographical and life narrative analyses, such as "peak experiences" (Maslow, 1962), "peaks" (Fredrickson, 2000), "turning points" (Wheaton and Gotlib, 1997), and "momentous events" (Pillemer, 2001). All these concepts refer to most distinctive, influential, and emotionally charged experiences in life. As mentioned above, anchor periods also have an organizing role within the structural fabric of the life narrative. Notably, affective evaluations attached to anchor periods can be combined into trajectories that depict the evolvment of SWB along formative points of time (see the discussion about "narrative SWB" in Shmotkin, 2005).

Containing foci of personal meaning, anchor periods are likely to be associated with strong emotions, both positive and negative. Also, their special meaning is likely to be different from that of common, everyday experiences. As presented by Larsen et al. (2001, 2003), complex life conditions may evoke diverse modes of affect activation and organization. Thus, the context of anchor periods appears suitable for studying the variability of SWB types.

### 1.3. Overview and Hypotheses of the Current Study

The present study addressed the SWB typology as emerging in anchor periods that build up people's life stories. Four anchor periods were examined: two of positive valence (the happiest period and the most important period) and two of negative valence (the most miserable period and the most difficult period). Participants were at later life, thus providing their life stories with a broad time perspective. Classification into SWB types was made by cross-tabulating two affect evaluations of the participants regarding each of their anchor periods: *happiness* and *suffering* (see Figure 1). Three categories

of variables served as possible discriminators between the types: (1) sociodemographic characteristics; (2) temporal properties of the anchor periods (initiating age and duration); and (3) present SWB (life satisfaction and observed happiness).

An essential guideline in the study hypotheses was the aforementioned argument that SWB types are patterns of affect organization that adapt to situational and developmental needs. Therefore, although we expected a differentiation between SWB types in all periods, the distributions of participants within types and the specific discriminators between types were expected to differ across periods. The involvement of the three categories of discriminators was expected on the basis of prior knowledge. Thus, previous studies demonstrated the effects of sociodemographic characteristics (such as age and education) on affective complexity as well as on typologies similar to the one used here (Shmotkin, 1998; Keyes et al., 2002; Labouvie-Vief and Medler, 2002). There is also evidence on the effects of temporal properties of the personal past on one's well-being (Shmotkin and Eyal, 2003; Walker et al., 2003). The expectation to find relations between present SWB and SWB types attributed to the past is well established on the general consistency and stability of SWB evaluations (Diener, 1994; Diener et al., 1999). It should be noted that while SWB may show fairly typical relations with the above discriminators (such as positive correlations with education and past satisfaction), combinatory views of SWB dimensions or types may reveal interactive or otherwise elaborate relations of SWB with common correlates (Shmotkin, 2005).

In light of the above considerations, we adopted two major hypotheses that respectively related to the distribution of the SWB types and to the discrimination between the SWB types. First, we hypothesized that there would be a higher proportion of participants in congruous than in incongruous SWB types across all the anchor periods, but that the specific distribution of types would differ among the four periods in study. Specifically, we expected that there would be particularly higher proportions of congruous types than incongruous types in the happiest and the most miserable periods because these periods were assumed to evoke more polarized emotions whereas the most important and the most difficult periods were assumed to involve more calculated and ambivalent sentiments.

Second, we hypothesized that the SWB types would be differentiated by variables of different kinds, including sociodemographics, temporal properties of the anchor periods, and indicators of present SWB. We thought that this diversified discriminability would reflect the adaptational viability of SWB types as retrospectively seen in one's major periods in life.



## 2. METHOD

### 2.1. *Participants*

Participants were 499 Israelis who were interviewed during the years 2001 ( $n = 207$ ), 2002 ( $n = 134$ ) and 2003 ( $n = 158$ ). The interviews were conducted as an undergraduate course assignment on adult development and aging. Each student was asked to interview one elderly person who was not of her or his family members. All participants were interviewed in Hebrew, thus excluding from the current sample 130 interviewees who were interviewed in other languages (56.9% Russian, 40% Arabic, 3.1% English). The participants' age ranged from 58 to 94 years ( $M = 75.59$ ,  $SD = 7.72$ ). The proportion of women (65.5%) was higher than men. The majority (81.8%) were not born in the country. The marital status of most participants was equally split between married (46.4%) and widowed (46.6%). While 29.0% of the sample had either no formal education or elementary schooling, 29.6% had higher or academic education. Most participants rated themselves as having either "very good" or "pretty good" economic status (87.2%) and "very good" or "pretty good" health (79.3%). Regarding religion, a majority (59.8%) was secular. For further details of the descriptive characteristics, see Table I.

Out of the sample, 181 (36.3%) were Holocaust survivors as indicated by their positive answer to the question of whether they lived in any European country at the time when it was under a Nazi, or Pro-Nazi, regime during the years 1939–1945. These survivors reported various Holocaust-related experiences: 31.5% were in concentration camps, 38.1% were in labor camps, 28.2% were in the ghetto, 16.6% were on a constant escape from authorities, 16.6% were in hiding, 6.6% were partisans, and 6.6% used faked papers to survive. Another 19.3% also reported other Holocaust experiences such as being held in prison or staying at an orphanage. Forty percent of the Holocaust survivors reported more than one specific Holocaust experience.

### 2.2. *Measures*

2.2.1. *Sociodemographic Questionnaire*. This questionnaire consisted of queries about descriptive characteristics, including self-ratings of economic status and health.

2.2.2. *Anchor Periods Questionnaire*. This questionnaire included questions about the participants' lives. It opened with a request to give a short outline of one's life story ("please tell me your life story"). The following questions, both open- and closed-ended, addressed six anchor periods: the

TABLE I  
Percentage distributions of descriptive characteristics

Variable	<i>n</i>	%
Gender	498	
Women	326	65.5
Men	172	34.5
Place of birth	499	
Israel	91	18.2
Other	408	81.8
Family status <sup>a</sup>	498	
Single	5	1.0
Married	231	46.4
Divorced	30	6.0
Widowed	232	46.6
Education	499	
No formal education	60	12.0
Elementary school	85	17.0
Partial high school	115	23.0
Full high school	91	18.2
Higher education	100	20.0
Academic	48	9.6
Economic status	498	
Not good	9	1.8
Not so good	55	11.0
Pretty good	346	69.5
Very good	88	17.7
Health	498	
Not good	24	4.8
Not so good	79	15.9
Pretty good	248	49.8
Very good	147	29.5
Religiosity <sup>b</sup>	493	
Secular	295	59.8
Traditionalist	154	31.2
Religious	44	8.9
Holocaust survivor	499	
Survivors	181	36.3
Non survivors	318	63.7

*Note:* For the complete sample,  $n=499$ . <sup>a</sup>This variable was dichotomized into married (1) versus unmarried (2), the latter including single and divorced; <sup>b</sup>This variable was dichotomized into secular (1) versus religious (2), the latter including traditionalist.

happiest period, the most miserable period, the most important period, the most difficult period, the period that contained the greatest achievement, and the period that contained the greatest failure (for the sake of brevity, only the first four are currently reported). The order of the periods alternated between positive and negative ones with a counterbalance of a positive and negative period at the start. For each anchor period, participants were asked to give a short description, to note their age at its onset (initiating age) and its duration, and to rate their happiness and suffering during the particular period. Happiness and suffering were rated on respective scales ranging 0–10 (0 = “not happy at all”/“did not suffer at all,” 10 = “most happy”/“suffered the most”). In addition to the anchor periods, the participants were asked to describe their life at present and their life in future (5 years ahead). Using the above scales, the participants were also asked to rate their happiness and suffering for the present period, but only their happiness for the future period. Content analysis of the open-ended answers of the participants is not part of this report and will be reported separately.

*2.2.3. Satisfaction With Life Scale – SWLS (Diener, Emmons, Larsen, and Griffin, 1985).* This measure included five items of statements about one’s life (e.g., “I am satisfied with my life,” “In most ways my life is close to my ideal”). Respondents were asked to rate their agreement with these statements on a scale of 1 (“strongly disagree”) to 7 (“strongly agree”). The score was the respondent’s mean of ratings. The SWLS showed highly favorable psychometric properties (Diener et al., 1985; Pavot and Diener, 1993). Its Hebrew version was used in various studies in Israel (e.g., Shmotkin and Lomranz, 1998). Although the alpha coefficient of the SWLS usually exceeds 0.80, it was only 0.66 in the current study, possibly because the SWLS was presented as part of an oral interview and not in the standard self-administered format.

*2.2.4. Interviewer’s Rating.* Upon ending the interview, the interviewer rated his or her impression about the interviewee’s *general* happiness on a scale of 1 (“not happy at all”) to 5 (“very happy”). This was part of various reports that the interviewer made about the interview and the interviewee.

### *2.3. Procedure*

Participants were interviewed at their homes or other places convenient to them. The interviewers were instructed how to approach the interviewees, follow the study’s questionnaire booklet, and respond to potential

difficulties. They were asked to write down the interviewees' own words as accurately as possible. The median duration of the interviews was 90 min.

### 3. RESULTS

#### 3.1. *The Participants' Responses Regarding the Anchor Periods*

Descriptive results of the happiness and suffering ratings in each of the four anchor periods are presented in Table II. As expected, happiness ratings were higher than suffering ratings in the positive periods while suffering ratings were higher than happiness ratings in the negative periods (*t*-tests for paired samples were significant at the 0.001 level in all periods). The correlation between happiness and suffering ratings was significant at the 0.01 level in all periods ( $r = -0.30$  in the happiest period,  $r = -0.52$  in the most important period,  $r = -0.48$  in the most miserable period,  $r = -0.61$  in the most difficult period). Notably, a sizeable portion of the sample refrained from rating happiness and suffering (see Table II), with the percentages of missing values on these scales ranging from 11.0% to 16.8% in the four periods. The percentages of missing values on the question of the initiating age of each period were similar (13.8–14.4%) while those on the question of the period's duration ranged from 19.6% (in the most difficult period) to 31.9% (in the happiest period). For comparison, the percentages of missing values on all the other study variables (listed in Tables III and IV) ranged as low as 0–2.2%.

#### 3.2. *The Distribution of SWB Types in the Anchor Periods*

In order to test our hypotheses, a 2×2 typology was created by cross-tabulating happiness and suffering ratings for each of the anchor periods.

TABLE II

Medians, means and standard deviations of happiness and suffering ratings in four anchor periods

Anchor period	Happiness				Suffering			
	<i>N</i>	Median	M	<i>SD</i>	<i>N</i>	Median	M	<i>SD</i>
Happiest	444	10	9.14	1.09	421	1	1.96	2.53
Most important	435	9	8.33	1.88	424	2	2.80	2.82
Most miserable	416	2	2.35	2.55	418	9	8.13	2.37
Most difficult	415	2	2.95	2.91	416	9	7.75	2.63

Note: For the complete sample,  $n = 499$ .

A division to “high” and “low” on each dimension was made according to the group median on the relevant measure. The median score was included in either the lower or higher section so that a maximally even division would be obtained. Figure 2 presents the distribution of SWB types in each period.

As hypothesized, for each of the four anchor periods, the proportion of participants in the congruous types (Types 1 and 4) was significantly higher than that in the incongruous types (Types 2 and 3), with all chi-square tests being significant at the 0.001 level. The proportion of participants in the incongruous types of the two positive periods was higher (approximately 30% for each period) than in the incongruous types of the two negative periods (approximately 19% for each period), Cochran’s  $Q=21.0$ ,  $df=3$ ,  $p<0.001$ . The Cochran test was not significant when comparing proportions of congruous and incongruous types only between the two positive periods as well as only between the two negative periods. These results are not fully in line with the expectation to find higher proportions of congruous types in the happiest and the most miserable periods rather than in the other two periods.

3.3. Discriminant Analyses of the SWB Types in the Anchor Periods

In order to examine whether the SWB types could be differentiated, discriminant analyses were conducted for each anchor period. In these analyses, 13 variables served as discriminators. Tables III and IV present distribution data of these variables for each type in each of the anchor

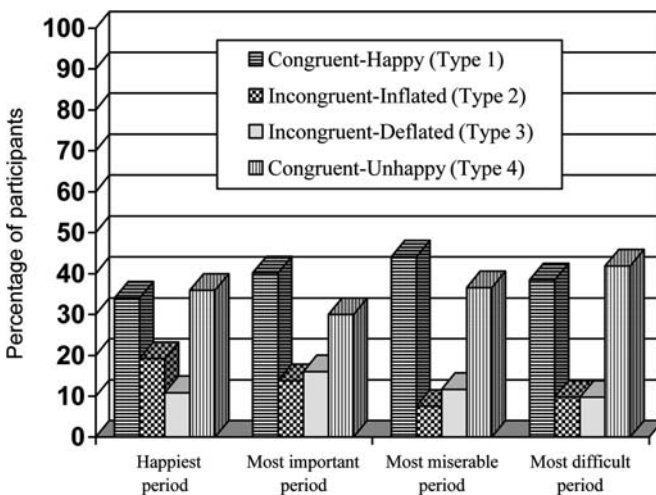


Fig. 2. The distributions of SWB types in four anchor periods.

TABLE III  
Means, standard deviations (in parentheses) and percentages (in dichotomous variables) of the study variables according to SWB types in positive anchor periods

Variable	Happiest period				Most important period			
	Type <sup>a</sup> 1 ( <i>n</i> = 101)	Type 2 ( <i>n</i> = 49)	Type 3 ( <i>n</i> = 34)	Type 4 ( <i>n</i> = 112)	Type 1 ( <i>n</i> = 119)	Type 2 ( <i>n</i> = 41)	Type 3 ( <i>n</i> = 54)	Type 4 ( <i>n</i> = 87)
Age	76.65 (7.60)	74.16 (7.29)	76.03 (9.05)	74.43 (8.43)	75.81 (7.75)	75.49 (7.28)	75.17 (9.13)	74.31 (6.74)
Gender <sup>b</sup> (% women)	69	80	62	57	70	63	48	69
Place of birth <sup>c</sup> (% not Israel)	79	75	85	79	80	80	78	82
Family status <sup>d</sup> (% unmarried)	57	59	62	44	56	41	44	52
Education	3.17 (1.26)	3.35 (1.80)	3.82 (1.38)	3.71 (1.54)	3.25 (1.44)	3.51 (1.50)	3.68 (1.53)	3.48 (1.53)
Economic status	3.07 (0.55)	2.94 (0.63)	3.12 (0.54)	3.05 (0.58)	3.04 (0.56)	3.00 (0.55)	3.09 (0.52)	2.98 (0.61)
Health	3.12 (0.78)	2.86 (0.87)	3.18 (0.63)	3.04 (0.76)	3.00 (0.85)	2.88 (0.81)	3.22 (0.77)	3.07 (0.64)
Religiosity <sup>e</sup> (% religious)	42	51	35	35	39	49	37	47
Survivor <sup>f</sup> (% non-survivors)	63	73	71	64	73	63	68	61
Period's duration (in months)	196.47 (196.46)	232.06 (203.04)	179.65 (178.09)	155.16 (171.89)	174.26 (195.57)	210.24 (216.57)	178.81 (181.45)	110.24 (146.07)
Initiating age of the period	31.49 (18.63)	30.92 (16.42)	30.78 (15.49)	35.38 (16.95)	26.65 (14.62)	26.80 (13.99)	27.73 (13.07)	30.39 (14.57)
Life satisfaction	5.35 (1.19)	5.15 (1.17)	4.94 (0.94)	4.85 (1.05)	5.37 (1.05)	4.90 (1.32)	5.17 (1.00)	4.79 (1.22)
Interviewer's rating	3.70 (1.00)	3.67 (1.09)	3.59 (0.99)	3.54 (1.00)	3.76 (0.97)	3.56 (1.11)	3.68 (0.99)	3.46 (1.05)

Note: Reported *n*'s are after a listwise deletion of respondents with missing data. <sup>a</sup>Type 1 = Congruent-Happy; Type 2 = Incongruent-Inflated; Type 3 = Incongruent-Deflated; Type 4 = Congruent-Unhappy; <sup>b</sup>Men (1), women (2); <sup>c</sup>Israel (1), other (2); <sup>d</sup>Married (1), unmarried (2); <sup>e</sup>Secular (1), religious (2); <sup>f</sup>Holocaust survivor (1), not Holocaust survivor (2).

periods. Following the discriminant analyses of the four types, more refined information was obtained by additional discriminant analyses performed on specific pairs of types that were maximally differentiated by the centroids of simultaneous as well as stepwise solutions obtained in the initial analyses. All pairs of types chosen for further analysis were confirmed as significantly separated by Mahalanobis'  $D^2$  index (for all pairs,  $p < 0.05$ ). Tables V–VIII present the results of the discriminant analyses with both the simultaneous and the stepwise inclusion methods.

### 3.4. *The Happiest Period*

As Table V reveals, the discriminant analysis in the happiest period yielded one significant discriminant function, which explained 65.3% of the variance between types. As indicated by the centroids, the function differentiated mainly between the two types high in happiness (*Happy* and *Inflated*) and the two types low in happiness (*Unhappy* and *Deflated*). The maximal differentiation was between *Inflated* (Type 2) and *Unhappy* (Type 4) in the simultaneous solution and between *Happy* (Type 1) and *Unhappy* (Type 4) in the stepwise solution. The main discriminators in the stepwise solution were life satisfaction, education and gender. As expected, high-happiness types had higher levels of life satisfaction than low-happiness types. Low-happiness types in the happiest period were likely to be more educated than high-happiness types. A higher proportion of women were classified to high-happiness types.

According to the additional analyses of pairs of types with the largest distance between centroids, *Inflated* (Type 2) included a higher proportion of women and longer period's duration reports than *Unhappy* (Type 4). *Happy* (Type 1) was differentiated from *Unhappy* (Type 4) by higher life satisfaction, lower education, a younger initiating age of the happiest period, and a lower proportion of married participants.

### 3.5. *The Most Important Period*

For this period, two discriminant functions emerged significant in the stepwise, but not in the simultaneous, method (see Table VI). The first function, which explained 60.5% of the variance, maximally distinguished between *Happy* (Type 1) and *Unhappy* (Type 4). *Unhappy* was lower on life satisfaction and on period's duration than the other types. The second function, explaining 29.3% of the variance, mainly separated the two congruous types (*Happy* and *Unhappy*) from the incongruous types (*Inflated* and *Deflated*). There were lower proportions of women in the incongruous

TABLE IV  
Means, standard deviations (in parentheses) and percentages (in dichotomous variables) of the study variables according to SWB types in negative anchor periods

Variable	Most miserable period				Most difficult period			
	Type <sup>a</sup> 1 (n=146)	Type 2 (n=28)	Type 3 (n=39)	Type 4 (n=117)	Type 1 (n=128)	Type 2 (n=33)	Type 3 (n=34)	Type 4 (n=139)
Age	73.92 (7.78)	71.64 (7.49)	79.02 (8.23)	76.18 (5.96)	74.85 (8.48)	74.76 (8.45)	75.35 (6.08)	75.72 (7.07)
Gender <sup>b</sup> (% women)	64	82	54	69	54	76	53	73
Place of birth <sup>c</sup> (% not Israel)	75	64	92	92	76	85	79	91
Family status <sup>d</sup> (% unmarried)	46	61	67	57	48	36	44	61
Education	3.66 (1.50)	3.61 (1.45)	3.61 (1.48)	2.82 (1.44)	3.66 (1.50)	3.91 (1.70)	3.62 (1.54)	3.00 (1.42)
Economic status	3.06 (0.51)	3.00 (0.61)	2.90 (0.72)	3.04 (0.65)	3.09 (0.49)	3.00 (0.56)	3.18 (0.58)	2.98 (0.58)
Health	3.13 (0.73)	3.07 (0.86)	2.92 (0.84)	2.86 (0.85)	3.21 (0.74)	2.97 (0.68)	3.15 (0.66)	2.90 (0.79)
Religiosity <sup>e</sup> (% religious)	36	57	28	54	33	39	38	52
Survivor <sup>f</sup> (% non-survivors)	76	75	54	43	76	67	53	49
Period's duration (in months)	57.86 (59.97)	113.18 (141.47)	74.09 (127.38)	57.49 (63.20)	65.23 (80.28)	84.24 (79.06)	47.88 (39.54)	76.82 (107.95)
Initiating age of the period	32.33 (21.19)	40.03 (19.64)	34.72 (22.73)	32.71 (21.63)	34.70 (18.16)	40.67 (20.60)	37.32 (19.67)	33.48 (21.61)
Life satisfaction	5.14 (1.07)	5.28 (1.12)	4.81 (1.31)	4.93 (1.24)	5.24 (0.99)	5.17 (1.26)	5.23 (1.07)	4.83 (1.26)
Interviewer's rating	3.79 (0.91)	3.64 (1.03)	3.33 (1.06)	3.43 (1.08)	3.77 (0.96)	3.94 (0.90)	3.68 (1.15)	3.29 (1.03)

Note: Reported *n*'s are after a listwise deletion of respondents with missing data. <sup>a</sup>Type 1 = Congruent-Happy; Type 2 = Incongruent-Inflated; Type 3 = Incongruent-Deflated; Type 4 = Congruent-Unhappy. <sup>b</sup>Men (1), women (2). <sup>c</sup>Israel (1), other (2). <sup>d</sup>Married (1), unmarried (2). <sup>e</sup>Secular (1), religious (2). <sup>f</sup>Holocaust survivor (1), not Holocaust survivor (2).



types, especially in *Deflated* (Type 3). In addition, participants in incongruous types tended to report a longer duration of this period than in congruous types.

The additional analyses discriminated between the two most distant types in the respective significant functions of the stepwise solution. Thus, life satisfaction and the period's duration were higher in *Happy* (Type 1) than in *Unhappy* (Type 4), and the proportion of women was higher in *Happy* (Type 1) than in *Deflated* (Type 3).

### 3.6. *The Most Miserable Period*

The discriminant analysis for this period yielded three significant functions presented in Table VII. The first function, which explained 60% of the variance, separated mainly between the types with high happiness (*Happy* and *Inflated*) and those with low happiness (*Unhappy* and *Deflated*) with maximal separation between *Inflated* (Type 2) and *Unhappy* (Type 4). Those reporting high happiness during this period (*Happy* and *Inflated*) were less likely to be Holocaust survivors, tended to be more educated, and were younger than those reporting lower levels of happiness (*Unhappy* and *Deflated*). The second discriminant function explained another 24.6% of the variance and separated mainly between the low-suffering types (*Happy* and *Deflated*) and the high-suffering types (*Inflated* and *Unhappy*) with maximal separation between *Inflated* (Type 2) and *Deflated* (Type 3). Participants in *Deflated* (Type 3) were older compared to all other types. The high-suffering types (*Inflated* and *Unhappy*) included more religious people than the low-suffering types (*Happy* and *Deflated*). More women belonged to *Inflated* (Type 2), although gender did not reach significance in the stepwise solution. The third discriminant function, which explained 15.4% of the variance, separated the congruous from the incongruous types with maximal separation between *Happy* (Type 1) and *Inflated* (Type 2). The two incongruous types reported a longer duration of this period than the congruous types.

The three additional analyses revealed that participants in *Unhappy* (Type 4) reported a shorter duration of this period, were more likely to be born outside Israel, tended to be older and had lower education than those in *Inflated* (Type 2). Participants in *Inflated* (Type 2) were younger and more likely to be born in Israel than in *Deflated* (Type 3). Finally, *Happy* (Type 1) reported a shorter duration of this period and a younger initiating age than *Inflated* (Type 2).

### 3.7. The Most Difficult Period

As Table VIII reveals, the discriminant analysis in this period yielded one significant function, explaining 67.6% of the variance between types. The function separated mainly between the high-happiness types (*Happy* and *Inflated*) and the low-happiness types (*Unhappy* and *Deflated*) with maximal separation between *Happy* (Type 1) and *Unhappy* (Type 4). The high-happiness types included a lower proportion of Holocaust survivors than the low-happiness types. Participants in high-happiness types were also rated as

TABLE V  
Discriminant analysis results of SWB types in the happiest period

Discriminating variable	Analysis 1	Additional analyses	
	All four Types <sup>a</sup> Function 1	Type 2 & Type 4	Type 1 & Type 4
<i>Discriminant function coefficients</i>			
Age	-0.06	-0.23	0.09
Gender <sup>b</sup>	<b>0.44 (0.49)</b>	<b>0.43 (0.77)</b>	0.32
Place of birth <sup>c</sup>	-0.08	-0.01	-0.10
Family status <sup>d</sup>	0.26	0.37	0.29 ( <b>0.41</b> )
Education	-0.34 ( <b>-0.55</b> )	-0.03	<b>-0.48 (-0.58)</b>
Economic status	-0.25	<b>-0.41</b>	-0.12
Health	-0.05	-0.18	0.21
Religiosity <sup>e</sup>	0.23	0.27	0.19
Survivor <sup>f</sup>	0.13	0.29	-0.03
Periods' duration	0.38	<b>0.48 (0.69)</b>	0.17
Periods' initiating age	-0.38	-0.37	<b>-0.44 (-0.47)</b>
Life satisfaction	<b>0.50 (0.71)</b>	0.39	<b>0.55 (0.66)</b>
Interviewer's rating	0.23	0.38	0.08
<i>Discriminant function statistics</i>			
Canonical correlation	0.37 (0.29)	0.44 (0.29)	0.37 (0.34)
Significance	0.006 (0.001)	0.002 (0.001)	0.004 (0.000)
Explained variance	65.3 (88.7)	100	100
Centroids of			
Type 1	0.30 (0.33)		0.42 (0.38)
Type 2	0.52 (0.24)	0.74 (0.46)	
Type 3	-0.17 (-0.26)		
Type 4	-0.45 (-0.32)	-0.32(-0.20)	-0.38(-0.34)

*Note:* Entries present results of a simultaneous solution. In parentheses: results of a stepwise solution that included only variables entered at the 0.05 significance level. Coefficients higher than 0.40 are in boldface.  $n(\text{Type } 1) = 101$ ,  $n(\text{Type } 2) = 49$ ,  $n(\text{Type } 3) = 34$ ,  $n(\text{Type } 4) = 112$ . <sup>a</sup>Type 1 = Congruent-Happy; Type 2 = Incongruent-Inflated; Type 3 = Incongruent-Deflated; Type 4 = Congruent-Unhappy; <sup>b</sup>Men (1), women (2); <sup>c</sup>Israel (1), other (2); <sup>d</sup>Married (1), unmarried (2). <sup>e</sup>Secular (1), religious (2); <sup>f</sup>Holocaust survivor (1), not Holocaust survivor (2).

happier by the interviewers, were less religious, and had higher levels of education than participants in the low-happiness types.

According to the results of the additional analysis, *Happy* (Type 1) included lower proportions of Holocaust survivors and of religious participants than *Unhappy* (Type 4). Additionally, participants in *Happy* were rated as happier by the interviewers, had a lower proportion of women and a higher level of education compared to those in *Unhappy*.

TABLE VI  
Discriminant analysis results of SWB types in the most important period

Discriminating variable	Analysis 1		Additional analyses	
	All four Types <sup>a</sup>		Type 1 & Type 4	Type 1 & Type 3
	Function 1	Function 2		
<i>Discriminant function coefficients</i>				
Age	0.02	-0.06	0.08	0.06
Gender <sup>b</sup>	0.07 (-0.01)	<b>0.43 (0.89)</b>	0.04	<b>0.66 (1.00)</b>
Place of birth <sup>c</sup>	0.02	0.10	-0.03	0.04
Family status <sup>d</sup>	0.20	0.32	0.15	0.15
Education	-0.30	-0.32	-0.33	<b>-0.41</b>
Economic status	-0.02	-0.14	0.00	-0.05
Health	-0.28	0.06	-0.26	-0.35
Religiosity <sup>e</sup>	-0.27	-0.11	-0.29	-0.14
Survivor <sup>f</sup>	0.35	0.09	0.35	0.20
Periods' duration	<b>0.47 (0.66)</b>	<b>-0.57 (-0.30)</b>	<b>0.52 (0.64)</b>	-0.10
Periods' initiating age	-0.11	0.32	-0.17	0.01
Life satisfaction	<b>0.57 (0.81)</b>	0.13 (0.33)	<b>0.56 (0.84)</b>	0.23
Interviewer's rating	0.30	0.03	0.24	0.24
<i>Discriminant function statistics</i>				
Canonical correlation	0.31 (0.26)	0.22 (0.19)	0.37 (0.31)	0.29 (0.22)
Significance	0.054 (0.000)	0.389 (0.007)	0.006 (0.000)	0.313 (0.004)
Explained variance	54.0 (60.5)	27.1 (29.3)	100	100
Centroids of				
Type 1	0.35 (0.24)	0.14 (0.16)	0.34 (0.28)	0.21 (0.15)
Type 2	-0.04 (0.02)	-0.35 (-0.17)		
Type 3	-0.02 (0.11)	-0.32 (-0.33)		-0.45(-0.33)
Type 4	-0.44 (-0.41)	0.18 (0.06)	-0.46(-0.38)	

Note: Entries present results of a simultaneous solution. In parentheses: results of a stepwise solution that included only variables entered at the 0.05 significance level. Coefficients higher than 0.40 are in boldface. *n*(Type 1) = 119, *n*(Type 2) = 41, *n*(Type 3) = 54, *n*(Type 4) = 87. <sup>a</sup>Type 1 = Congruent-Happy; Type 2 = Incongruent-Inflated; Type 3 = Incongruent-Deflated; Type 4 = Congruent-Unhappy; <sup>b</sup>Men (1), women (2); <sup>c</sup>Israel (1), other (2). <sup>d</sup>Married (1), unmarried (2). <sup>e</sup>Secular (1), religious (2). <sup>f</sup>Holocaust survivor (1), not Holocaust survivor (2).

TABLE VII  
Discriminant analysis results of SWB types in the most miserable period

Discriminating variable	Analysis 1			Additional analyses			
	All four Types <sup>a</sup>			Type 2 & Type 4	Type 2 & Type 3	Type 1 & type 2	
	Function 1	Function 2	Function 3				
<i>Discriminant function coefficients</i>							
Age	-0.29 (-0.38)	<b>-0.48 (0.65)</b>	0.08 (0.34)	<b>-0.45 (0.49)</b>	<b>-0.45 (0.75)</b>	-0.25	
Gender <sup>b</sup>	0.08	<b>0.41</b>	-0.19	0.07	0.35	0.16	
Place of birth <sup>c</sup>	-0.19	-0.26	-0.15	<b>-0.44 (0.54)</b>	<b>-0.47 (0.53)</b>	-0.23	
Family status <sup>d</sup>	-0.10	-0.05	0.32	0.04	-0.14	0.21	
Education	<b>0.45 (0.53)</b>	-0.20 (0.17)	0.30 (0.37)	0.38 ( <b>-0.45</b> )	-0.12	0.08	
Economic status	-0.16	0.24	-0.23	-0.25	0.25	-0.06	
Health	0.05	-0.14	0.08	0.05	-0.17	0.01	
Religiosity <sup>e</sup>	-0.19 (-0.28)	<b>0.50 (-0.55)</b>	0.00 (0.11)	-0.09	<b>0.40</b>	0.32	
Survivor <sup>f</sup>	<b>0.57 (0.65)</b>	-0.28 (0.08)	-0.31 (-0.22)	0.08	0.07	-0.10	
Periods' duration	0.20 (0.20)	0.10 (-0.25)	<b>0.75 (0.90)</b>	<b>0.54 (-0.56)</b>	0.22	<b>0.61 (0.90)</b>	
Periods' initiating age	-0.09	0.12	0.36	0.17	0.11	0.36 ( <b>0.52</b> )	
Life satisfaction	0.07	0.30	0.14	0.30	0.25	0.25	
Interviewer's rating	0.26	-0.01	-0.20	0.04	0.13	-0.12	
<i>Discriminant function statistics</i>							
Canonical correlation	0.45 (0.42)	0.31 (0.24)	0.25 (0.19)	0.53 (0.50)	0.60 (0.48)	0.35 (0.29)	
Significance	0.000 (0.000)	0.001 (0.000)	0.044 (0.006)	0.000 (0.000)	0.014 (0.000)	0.057 (0.001)	
Explained variance	60.0 (67.9)	24.6 (19.7)	15.4 (12.4)	100	100	100	
Centroids of							
Type 1	0.44 (0.40)	-0.01 (0.05)	-0.16 (-0.13)			-0.16 (-0.13)	
Type 2	0.56 (0.50)	0.66 (-0.57)	0.58 (0.42)			0.85 (0.69)	
Type 3	-0.25 (-0.11)	-0.67 (0.50)	0.43 (0.36)	1.27 (-1.16)		-0.63 (0.45)	
Type 4	-0.60 (-0.58)	0.16 (-0.10)	-0.01 (-0.05)	-0.30 (0.28)			

Note: Entries present results of a simultaneous solution. In parentheses: results of a stepwise solution that included only variables entered at the 0.05 significance level. Coefficients higher than 0.40 are in boldface.  $n(\text{Type 1}) = 146$ ,  $n(\text{Type 2}) = 28$ ,  $n(\text{Type 3}) = 39$ ,  $n(\text{Type 4}) = 117$ . <sup>a</sup>Type 1 = Congruent-Happy; Type 2 = Incongruent-Inflated; Type 3 = Incongruent-Deflated; Type 4 = Congruent-Unhappy; <sup>b</sup>Men (1), women (2); <sup>c</sup>Israel (1), other (2); <sup>d</sup>Married (1), unmarried (2); <sup>e</sup>Secular (1), religious (2); <sup>f</sup>Holocaust survivor (1), not Holocaust survivor (2).

### 3.8. Summary of the Discriminant Analysis Results

The series of discriminant analysis revealed that throughout all the anchor periods at least one significant discriminant function was obtained, explaining considerable proportions of the variance between SWB types (ranging from 60% to 68%). Two functions were significant in the most important period and three functions were significant in the most miserable period.

Considering both simultaneous and stepwise solutions, the first discriminant function in all but the most important period distinguished between types high on happiness (*Happy* and *Inflated*) and types low on happiness (*Unhappy* and *Deflated*). Beyond this distinction, the maximal separation was obtained between *Happy* and *Unhappy* in all but the most miserable period (where the Mahalanobis'  $D^2$  index indicated a significant separation as well). A further discrimination between congruous types (*Happy* and *Unhappy*) and incongruous types (*Inflated* and *Deflated*) was obtained by a second function in the most important period and by a third function in the most miserable period. Additional discriminations were obtained between *Inflated* and *Unhappy* in the happiest and the most miserable periods; between *Happy* and *Deflated* in the most important period; and between *Inflated* and *Deflated* as well as between *Inflated* and *Happy* in the most miserable period.

Of the 13 variables entered into the analyses, 11 were significant discriminators at least in one period. Gender and education were the most common sociodemographic discriminators between types. Women were more likely to be classified as *Inflated* whereas men were more likely to be classified as *Deflated*. *Happy* in the happiest period and *Unhappy* in the negative periods (the most miserable and the most difficult) had the lowest education comparing to other types. Religiosity and being a Holocaust survivor were significant discriminators in the two negative periods. Thus, religious people were more frequently classified as *Unhappy* or *Inflated* (high-suffering types) than as *Happy* or *Deflated* (low-suffering types), and Holocaust survivors were more frequently classified as *Unhappy* or *Deflated* (low-happiness types) than as *Happy* or *Inflated* (high-happiness types). Age and place of birth were significant discriminators only in the most miserable period and family status was a significant discriminator only in the happiest period. Finally, economic status and health had no significant contribution to the discriminating variance between types in any of the periods.

Concerning the anchor periods' attributes, duration was a significant discriminator in three periods (the happiest, the most important and the

most miserable) so that participants in *Inflated* were more likely to report a longer period's duration than those in other types, especially *Unhappy*. The initiating age of the periods was a significant discriminator in the happiest and the most miserable periods. Concerning the well-being measures, life satisfaction was a potent discriminator in the two positive periods (the happiest and the most important), being highest in *Happy* and lowest in *Unhappy*. Interviewers' ratings of the participants' observed happiness discriminated between types only in the most difficult period.

TABLE VIII  
Discriminant analysis results of SWB types in the most difficult period

Discriminating variable	Analysis 1 All four Types <sup>a</sup> Function 1	Additional analyses Type 1 & Type 4
<i>Discriminant function coefficients</i>		
Age	-0.05	0.02
Gender <sup>b</sup>	-0.27 (-0.31)	-0.29 (-0.33)
Place of birth <sup>c</sup>	-0.13	-0.15
Family status <sup>d</sup>	-0.12	-0.12
Education	0.28 (0.32)	0.28 (0.30)
Economic status	-0.03	-0.02
Health	0.06	0.09
Religiosity <sup>e</sup>	<b>-0.40 (-0.40)</b>	<b>-0.40 (-0.42)</b>
Survivor <sup>f</sup>	<b>0.48 (0.59)</b>	<b>0.54 (0.61)</b>
Periods' duration	0.02	0.07
Periods' initiating age	0.10	-0.01
Life satisfaction	0.13	0.16
Interviewer's rating	0.37 ( <b>0.46</b> )	0.28 ( <b>0.42</b> )
<i>Discriminant function statistics</i>		
Canonical correlation	0.43 (0.42)	0.46 (0.45)
Significance	0.000 (0.000)	0.000 (0.000)
Explained variance	67.6 (83.7)	100
Centroids of		
Type 1	0.47 (0.47)	0.54 (0.53)
Type 2	0.31 (0.28)	
Type 3	-0.14 (0.08)	
Type 4	-0.54 (-0.52)	-0.50(-0.49)

*Note.* Entries present results of a simultaneous solution. In parentheses: results of a stepwise solution that included only variables entered at the 0.05 significance level. Coefficients higher than 0.40 are in boldface.  $n(\text{Type } 1) = 128$ ,  $n(\text{Type } 2) = 33$ ,  $n(\text{Type } 3) = 34$ ,  $n(\text{Type } 4) = 139$ . <sup>a</sup>Type 1 = Congruent-Happy; Type 2 = Incongruent-Inflated; Type 3 = Incongruent-Deflated; Type 4 = Congruent-Unhappy; <sup>b</sup>Men (1), women (2); <sup>c</sup>Israel (1), other (2); <sup>d</sup>Married (1), unmarried (2); <sup>e</sup>Secular (1), religious (2); <sup>f</sup>Holocaust survivor (1), not Holocaust survivor (2).

## 4. DISCUSSION

This study has examined the conception of *differential SWB* within the realm of life narratives. This conception was formulated by Shmotkin (1998, 2005) as part of a theoretical model positing that the modularity and plurality of SWB manifestations reflect a dynamic SWB system whose function is to constitute a favorable psychological environment in the face of adversity. Within this model, differential SWB facilitates flexible modes of adaptation, termed as *SWB types*, that derive from the intersection of basic SWB dimensions. While prior research delineated SWB types out of individuals' evaluations of their present SWB, this study has delineated them out of individuals' evaluations of their past. The study shows that SWB types are embedded in *anchor periods* that serve as outstandingly meaningful milestones in individuals' life stories. The viability of these SWB types is confirmed by their differential relationships with an array of personal characteristics that are likely to affect processes of adaptation and mental health.

In this study, SWB types were operationalized by cross-tabulating self-ratings of happiness (representing PA) and suffering (representing NA) in respondents' retrospective evaluations of four anchor periods in life. In accordance with our first hypothesis, there were higher proportions of participants in congruous types (*Happy* and *Unhappy*) in all periods; still, the proportions of participants in incongruous types (*Inflated* and *Deflated*) were not negligible. The expectation that there would be particularly higher proportions of congruous types in the happiest and the most miserable periods was only partially supported; rather, the happiest and the most important periods had relatively higher proportions of *incongruous* types than the negative periods.

The findings concerning the differential distributions of SWB types in positive versus negative anchor periods suggest that favorable, rather than unfavorable, experiences facilitate a higher prevalence of incongruent types by allowing a non-reciprocal activation of both PA (happiness) and NA (suffering), whether at high or low levels. This is in line with Trope et al.'s (2001) finding that positive mood enables people to be more open to negative information about themselves. It is also in line with Reich et al.'s (2003) postulation that PA and NA merge into a parsimoniously bipolar organization in stressful, rather than favorable, life conditions. Yet, the effect of the valence (positive versus negative) of the anchor period on the prevalence of SWB types involves a further aspect of complexity. Thus, the congruous types of *Happy* in positive periods and *Unhappy* in negative

periods perfectly match the respective periods' valence. However, the *Unhappy* counterpart in positive periods and the *Happy* counterpart in negative periods, although congruous in terms of the reciprocal dominance of either PA or NA, reflect affective complexity where happiness and suffering dialectically interact with their context. When the latter cases of *Happy* and *Unhappy* are added to the incongruous *Inflated* and *Deflated*, it seems that SWB types may express diverse experiences of inconsistencies. This is in line with our conception that the anchor periods, representing peaks of emotions and meanings, contain unusual and complex experiences that may give rise to less harmonic forms of emotional activation and organization (cf. Larsen et al., 2001, 2003).

The results amply supported our second hypothesis by showing that SWB types were differentiated from each other by different kinds of variables in all the anchor periods. While the most frequent discrimination was between the two congruous types of *Happy* and *Unhappy*, discrimination between *Inflated* and *Deflated* was also evident. Next we discuss the role of the major discriminators between SWB types.

Gender played a role in differentiating SWB types in all periods. Within the discriminant analysis design, women were more likely than men to be *Inflated* in both a positive (the happiest) period and a negative (the most miserable) period. In another positive period (the most important) women were more likely to be *Happy* than *Deflated*, and in another negative period (the most difficult) more *Unhappy* than *Happy*. That is, women tended to report simultaneously high levels of both happiness and suffering, or at least a high level of the affect compatible with the valence of the particular period. It seems then that gender mainly involves intensity of affect. Although little gender differences are usually found in SWB (Haring et al., 1984; Shmotkin, 1990), there is evidence of higher emotional intensity in women than men (Fujita et al., 1991). Moreover, as reviewed by Robinson and Clore (2002), gender differences in reported emotions are pronounced when reports are retrospective and emotions are global.

Education provides a remarkable demonstration of the interaction between SWB types and the context of periods in life. The lowest levels of education were attached to *Happy* in the happiest period (a similar result, albeit nonsignificant, appeared in the most important period) as well as to *Unhappy* in the negative (most difficult and most miserable) periods. As suggested above, *Happy* in positive periods and *Unhappy* in negative periods represent the least complex forms of emotional organization in terms of both congruity between the mutually exclusive activation of PA versus NA and compatibility of the dominant affect with the period's valence. Thus, the



discriminability of SWB types by education may therefore reflect individuals' differences in cognitive-affective complexity. This finding is in line with other studies relating higher education to affect complexity (Labouvie-Vief and Medler, 2002) and to distinct profiles of well-being (Keyes et al., 2002; Markus et al., 2004).

As explicated, the valence of the anchor periods plays an important role in the empirical discrimination of SWB types associated with these periods. More findings further demonstrate this contextual effect. Thus, present life satisfaction discriminated most strongly between *Happy* and *Unhappy* in the positive, but not in the negative, periods. On the other hand, whether participants were Holocaust survivors discriminated most strongly between low- and high-happiness types in the negative, but not in the positive, periods. Also, religiosity discriminated between low- and high-suffering types in the negative, but not in the positive, periods. Hence, positive and negative periods are not symmetric in producing variations among SWB types. The case of Holocaust survivors provides a plausible example regarding the dynamics of this asymmetry. Studies on physical and mental health of Holocaust survivors (Shmotkin and Lomranz, 1998; Shmotkin et al., 2003) revealed high resilience in the survivors' general adaptation along with vulnerability in differential domains of well-being such as memories of traumatic life events and aging-related concerns. Thus, the trauma-based sensitivity of the survivors to their most miserable and most difficult periods did not spill over into the positive periods of life.

Temporal attributes of the anchor periods contributed to the discrimination of SWB types. Thus, longer durations of anchor periods were reported mainly by participants in *Inflated* than in other types. Possibly, longer durations had facilitated the emergence of high levels of both happiness and suffering. Such effect should be explored vis-à-vis the "duration neglect" phenomenon whereby privileged moments of affective episodes render the episodes' duration unimportant (Fredrickson, 2000). Playing a less pronounced role, the periods' initiating age tended to be higher in the intricate types of *Unhappy* in the happiest period and *Inflated* in the most miserable period. These findings join more evidence that the structuring of anchor periods in life narratives relates to SWB, particularly among people who underwent a massive trauma in life (K. Cohen and D. Shmotkin, submitted).

Certain variables provided a limited contribution to the differentiation of SWB types (age, place of birth, family status, interviewer's rating) or no contribution at all (economic status, self-rated health). However, it does not mean that those variables have no role in characterizing SWB types. For

example, economic status and health served as potent discriminators between types in Shmotkin's (1998) study. Some of these variables were probably redundant to others within the particular equations of the current discriminant analyses. It is also possible that these variables lose their effects when SWB types are delineated by retrospective, rather than present, evaluations of SWB. These possibilities await further investigation.

A most pertinent issue in this study is the reliance of affect ratings concerning past periods on the respondents' memory. People's accessibility to their past emotions may be largely selective and biased. Robinson and Clore (2002) suggest that when using retrospective reports, people are influenced by their beliefs about the relevant affect rather than by the affect itself. Nevertheless, this does not undermine the meaning of SWB types in the current framework. Discussing emotion and memory in the aging process, Cavanaugh (1989) stressed the importance of how people feel about their memories rather than how accurate they are in reporting past emotions. Thus, beliefs about how positive and negative affects should relate to each other play an important role in the organization of affect. Studies have already demonstrated the effects of remembering past events and emotions on present SWB and adaptation (e.g., Seidlitz and Diener, 1993; Field, 1997; Schwarz and Strack, 1999; Rusting and DeHart, 2000; Walker et al., 2003). Hence, a fuller conception of SWB should integrate SWB types derived from evaluations of the past (as analyzed in this study) with SWB types derived from evaluations of the present (as analyzed in Shmotkin's [1998] study).

The findings of this study must be evaluated in view of its methodological limitations. First, although providing a fair heterogeneity in part of the background variables, the current sample was not representative of the Israeli older population. The students, who served as interviewers, presumably recruited cooperative participants from their own socioeconomic milieu. A further sampling restriction was imposed by analyzing only Hebrew-speaking participants. Second, the classification of SWB types by division of participants into "high" and "low" on affect dimensions was made by medians in highly skewed distributions of one-item rating measures. Thus, in the happiest period, the ratings of 10 and 0 on the respective scales of happiness and suffering had to be contrasted with all the other ratings on those scales. This split, besides being largely arbitrary, raises a question about the appropriate labeling of types. Thus, for being *Happy* in the highly skewed ratings of the happiest period, a respondent had to belong to the 52.5% who rated themselves highest on the happiness scale and the 44.9% who rated themselves lowest on the suffering scale. A third limitation concerns the portion of participants with missing values on attributes of the

anchor periods. Possibly, the articulation of anchor periods is overly demanding, both cognitively and emotionally, for part of the population in later life. This possibility may restrict the general applicability of the anchor period concept and therefore should be further explored.

Conceptually, the currently investigated types of SWB bear implications for mental health but do not directly reflect actual psychological functioning, whose facets are vital to assess positive health at large (Ryff and Singer, 1998). Yet, this study is in line with noteworthy endeavors to delineate basic modes of flourishing and languishing that constitute mental health independently of psychopathology (Keyes, 2005). In this perspective, the current study solidifies certain lines of thought in Shmotkin's (2005) conceptualization of SWB. First, the juxtaposition of happiness and suffering highlights the proposition that a primary role of SWB is to constitute a favorable psychological environment in the face of adversity. Second, the study of differential SWB, as embodied by SWB types, suggests that varieties, rather than generalizations, of SWB may better capture its adaptational function and potential contribution to mental health. Finally, life narratives, including anchor periods as pertinent constituents, provide an intriguing arena for linking past SWB with present SWB in people's conceptions of their lives.

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