Leisure Sciences

ISSN: 0149-0400 (Print) 1521-0588 (Online) Journal homepage: http://www.tandfonline.com/loi/ulsc20

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To cite this article: Galit Nimrod (2007) Expanding, Reducing, Concentrating and Diffusing: Post Retirement Leisure Behavior and Life Satisfaction, Leisure Sciences, 29:1, 91-111, DOI: 10.1080/01490400600983446

To link to this article: http://dx.doi.org/10.1080/01490400600983446

Leisure Sciences, 29: 91–111, 2007

ISSN: 0149-0400 print / 1521-0588 online
DOI: 10.1080/01490400600983446

Routledge
Taylor & Francis Group

Expanding, Reducing, Concentrating and Diffusing: Post Retirement Leisure Behavior and Life Satisfaction

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This study examined patterns of continuity and change in leisure behavior of recently retired individuals. The study investigated post-retirement leisure behavior in an Israeli national sample. It explored the differences among four defined groups: reducers, concentrators, diffusers *and* expanders*, and measured their leisure participation and life satisfaction. Results indicated that the* expanders *and the* concentrators *enjoyed a significantly higher life satisfaction. The findings supported activity theory and continuity theory. They also led to the conclusion that for people who had a limited leisure repertoire prior to retirement, experiencing new activities was just as important as continuity in the adaptation process of retirement.*

Keywords retirement, activity, life satisfaction, continuity, innovation

Retiring from work seems to be one of the major changes that characterizes aging. While facing the transition and adjusting to a new life phase, the retired individual often is challenged by additional free time, including how to use it and how to reallocate energies in directions previously related to work. Successfully coping with this challenge may be a key factor in successful adaptation to retirement. Moreover, since leisure usually becomes a larger component in a retired individual's life, retirement may increase the influence that leisure has on psychological well being.

For some people, this transition may include continuing or expanding previous high-investment leisure activities. For others especially lacking leisure interests, successful adaptation may depend on the initiation of new patterns. However, increasing activity is not predictable and starting new activities is less common. One of the most common descriptors of post-retirement is continuity in leisure behavior compared to the pre-retirement period (cf. Atchley, 1993; Iso-Ahola, Jackson, & Dunn, 1994).

Most studies about continuity and change in post-retirement leisure have examined only the behavioral aspect of leisure without addressing the consequential psychological effects of such behavior (e.g., Bennett, 1998; Verbrugge, Gruber-Baldini, & Fozard,

Received 30 June 2005; accepted 7 July 2006.

The research was financially supported by Brookdale Institute of Gerontology and Human Development; Eshel—the Association for the Planning and Development of Services for the Aged in Israel; The Department of Communication and Journalism, The Hebrew University of Jerusalem; The Harvey L. Silbert Center for Israel studies; Israel's Social Security Institute; The Israeli Local Community Centers Corporation; The Kama Foundation; The Israeli Ministry of Labor and Social Welfare; The Levi Eshkol Institute for Social, Economic, and Political Research in Israel; The Shaine Center for Research in Social Sciences; The Smart Family Foundation Communications Institute; and by Strauss Group.

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1996). However, conclusions have been drawn regarding continuity's role in the adaptation process towards advanced age. In addition, previous studies (e.g., Robinson & Godbey, 1997; Rosenkoetter, Garris, & Engdahl, 2001) examined continuity as a general tendency without taking into account individual inclinations or type segmentation. They tended to provide measures for retirees as one group without referring to different types of behavior. The purpose of my research is to examine post-retirement continuity and change by addressing both leisure activity and life satisfaction to explore assertions about the contribution of continuity and change to psychological well being.

Literature Review

Retirement is a controversial subject. For work-oriented societies such as Israel and the United States, retirement may be fraught with feelings of loss of meaning and purpose. On the other hand, it can be used to benefit society as well as the retired individuals. Most evidence dispels the myth that retirement is traumatic and depressing (Hyde, Ferrie, Higgs, Mein & Nazroo, 2004; McPherson, 1990; Nuttman-Shwartz, 2004). Successful adjustment to retirement may be enhanced by maintaining active lifestyles, using work-related skills, and nourishing individual self-concepts to counteract the loss of former work roles (Price, 2003; Stebbins, 2000). In addition, adjustment may be eased by pre-retirement psychological preparation and leisure planning, which have a positive impact on the attitudes towards retirement (Rosenkoetter & Garris, 2001; Taylor-Carter & Cook, 1997).

Continuity and change in activity patterns plays an important role in the adjustment process to retirement and old age. Cavan (1949), a pioneer of this field, suggested the concept of engagement and argued that the best adaptation to advanced age depends on continuity between middle and advanced age. Cumming and Henry (1961) disputed this argument in offering the disengagement theory. They argued that the older one gets, the more one tends to withdraw from society and to focus on personal growth. This process was believed to be universal, inevitable, and intrinsic. They also claimed that social detachment contributed to a person's personal growth and helped those in the person's social environment cope with his or her approaching death. These two ideas of continuity and change stand at the heart of a theoretical discourse about the best ways to adapt to old age and the changes that accompany it.

The engagement argument evolved into activity theory (Havighurst, 1963), which stated that being involved and maintaining the activities and attitudes of middle age as long as possible were essential to well-being. Engagement in meaningful activity was linked to life satisfaction. When an activity is lost through retirement or other transitions, the individual must find a replacement. The main criticism of activity theory is that it is too simplistic (e.g., McGuire and Norman, 2005). Still, it has played a central role in gerontology. Many studies have supported this theory and demonstrated how elderly people's high level of involvement and activity contributed to their psychological well-being (e.g., Chiriboga & Pierce, 1993; Fernandez-Ballesteros, Zamarron, & Ruiz, 2001; Hall & Havens, 2002; Iso-Ahola et al., 1994; Kelly, 1987; Kozarevic, 1972; Lawton, 1994; Mishra, 1992; Mobilyet al., 1993; Riddick & Stewart, 1994; Searle, Mahon, Iso-Ahola, Sadrolias, & Van Dyck, 1995, 1998; Shmanske, 1997). However, the effects may not apply in all contexts to all subgroups and all activities. For example, in a study of leisure activities of older adults in Canada, Iwasaki and Smale (1998) found that social leisure was highly valued by retired women but not by retired men. A recent study by Nimrod (in press) demonstrated that only several types of activities had a positive impact on retirees' well being (e.g., cultural activities, enrichment activities, meeting with children and grandchildren, and activities that were associated with a sense of essentiality), while other activities had no impact at all. Some activities (e.g., TV and Radio) even had a negative impact.

Disengagement theory received less support than e activity theory, but interest in it has recently revived. Johnson and Barrer (1992) suggested that "some elements of the theory of disengagement may be relevant to the lives of very old individuals" (p. 352). When studying the social interactions of the very old, Johnson and Barer found that people who were generally older and in poorer health modified their social world by redefining their optimal level of social integration, rejecting norms that placed expectations on them, and by increasing introspection. These disengaging acts seemed to yield a sense of relief for the very old. The Selective Optimization with Compensation model (SOC), suggested by Baltes and colleagues (Baltes & Baltes, 1990; Baltes & Carstensen, 1996; Freund & Baltes, 1998, 2002), was applied to successful aging. The SOC model is not as radical as the disengagement theory, but it essentially argues that responding to limiting factors that accompany aging is adaptive and healthy. This adaptation can be done by being selective about the activities chosen, abandoning activities that are less meaningful, and compensating for loss of meaningful activities to optimize the more restricted number of alternatives. Recently, McGuire and Norman (2005) suggested that constraints to leisure can be positive factors in successful aging since they force individuals to initiate the SOC process required for successful aging.

Another relatively new theory of aging, gerotranscendence theory (Tornstam, 1989, 1997, 1999), provides an alternative perception of why some older adults may disengage from social activities. Gerotranscendence is described as a final stage in a natural and individual process towards maturation and wisdom. Gerotranscendence is a shift in perspective from a materialistic and rational view of the world to a more cosmic and transcendent one, which is normally accompanied by an increase in life satisfaction. According to the theory, individuals progressing towards gerotranscendence may experience a series of changes including a redefinition of the *self* and relationships with others as well as new understandings of existential issues. The theory proposes that individuals may become, for example, less self-occupied and at the same time more selective in their choice of social and other activities. Therefore, older people who withdraw from physical and social activities should not be regarded as disengaged or apathetic just because they have a greater need for contemplation.

While the activity theory and the disengagement theory can be considered as prescriptive theories that recommend ways to cope with aging (i.e., "the more the merrier" vs. "the less the better"), a third more descriptive theory emerged. Continuity theory (Atchley, 1989) is one of the most prominent theories in gerontology and may be perceived as an attempt to reconcile the contradicting activity and disengagement theories (McGuire & Norman, 2005). It does not deal with the optimal amount, frequency, or involvement of social activity, but rather explains elders' inclination towards continuity. The continuity theory posits that continuity is a primary adaptive strategy for dealing with changes associated with normal aging. Individuals wish to maintain stability in the same roles engaged in during their life course even though their aging may impose obstacles to these roles. Individuals will try to maintain continuity of psychological and social patterns adopted during their life course (e.g., attitudes, opinions, personality, preferences, and behavior) by developing stable activity patterns that help them to preserve earlier ones. In this context, internal continuity should be distinguished from external continuity (Atchley, 1993). Internal continuity is the continuity of different psychological characteristics including mainly the self (i.e., what people think about themselves), and identity (i.e., those aspects of the self that people evaluate as constant regardless of social situations). External continuity embodies the roles and activities of the physical and social environment. In advanced years of many external and internal changes, external continuity is an instrument that helps elderly people to preserve internal continuity.

Continuity may also serve as a coping strategy when facing negative life events that occur in old age (Kleiber, Hutchinson & Williams, 2002). Familiar leisure activities that are personally expressive, as well as continuity of significant past relationships, have great importance in restoring meaning and direction after NLE. Such activities are also likely to nurture perceptions of competence, control and freedom (Hutchinson, Loy, Kleiber & Dattilo, 2003), qualities that are considered to be moderating factors on the impact of stress on one's well-being (Coleman & Iso-Ahola, 1993).

Continuity theory does not exclude the existence of change. On the contrary, it argues that "continuity and change are themes that usually exist simultaneously in people's lives" (Atchley, 1999, p. 3). Leisure behavior is a dynamic process where individuals seek stability and change as well as familiarity and novelty both within themselves and with the environment (Iso-Ahola, 1980a). The leisure self evolves during the life course and is constantly being changed and renewed (Mobily, 1987). The tendency towards both continuity and change raises the issue of how to achieve equilibrium. Several studies revealed a general stability in leisure behavior during the life course but did not rule out the simultaneous search for new experiences (Crawford, Godbey, & Crouter, 1986; Lounsbury & Hoopes, 1988; Scott & Willits, 1989, 1998). Some research suggested that stability begins in childhood. McGuire, Dottavio and O'Leary (1987), for example, discovered that half of the activities adults participated in were started at a young age. Other activities resulted from interests and tendencies developed in adulthood. Studies also indicated that tendencies for continuity and novelty changed during the life course. The tendency to seek novelty decreased with age, whereas the tendency for continuity increased during aging (Iso-Ahola, 1980b; Iso-Ahola et al., 1994; McGuire, O'Leary, Yeh, & Dottavio, 1989).

Most studies about continuity and change in post-retirement leisure support the continuity theory. Although retirement is frequently perceived as a period of leisure, few retirees made drastic changes in their leisure patterns after retirement. Continuity is considered a main characteristic of post-retirement leisure. Retirees tend to continue participating in the same activities they enjoyed before retiring or return to high interest or high ability from the past. Retirees did not tend to participate in more activities than preretirement. Rather, they increased their participation in the same activities (Atchley, 1993; Dumazedier, 1972; Iso-Ahola et al., 1994; Kelly, 1983, 1987; Kremer & Harpaz, 1982; Levinson, 1986; Long, 1987; Parker, 1982). However, retirement effects seemed to differ within subgroups and activities. For example, Iwasaki and Smale (1998) reported that retirement had a positive effect on the frequency of leisure participation among men but not among women. A recent study by Janke, Davey, and Kleiber (2004) demonstrated that the transition to retirement increased individuals' participation in informal and physical leisure activities but not in formal activities.

Understanding continuity and change in leisure over time is a complex task. The tendency towards stability differs according to the types of activities. The tendency for continuity mainly characterizes activities that are of high importance or have special meaning for the individual (Lawton, 1993). However, in the presence of restrictions and limitations on participation, two adaptations may occur: (1) reinterpretation of activities (i.e., enhancing the importance of preserved activities and reducing the importance of unpreserved activities) and (2) reduction (i.e., finding substitutes for desirable activities such as telephone conversations for social meetings, watching sport competitions for physical activity) (Rubinstein, Kilbride, & Nagy, 1992).

Continuity may be predicted by sociodemographic and health characteristics. The ability to preserve continuity of activity patterns is affected by age and health status (Horgas, Wilms & Baltes, 1998; Strain, Grabusic, Searle & Dunn, 2002). However, the effects on men and women are not equal. Stanley and Freysinger (1995), for example, found that

the frequency of activity involvement declined significantly for men as they aged, whereas women's activity levels were more constant over time. A study by Iso-Ahola et al. (1994) showed that while older men were inclined to remain involved in their former activities, women were more likely to add new activities. Iso-Ahola et al. also demonstrated that gender was associated with the type of new activities. When older men added new activities, they chose various outdoor activities, whereas women added hobbies and physical activities.

The current knowledge on aging individuals' tendency towards continuity is derived from four kinds of studies:

(1) cross-sectional investigations of different age groups (e.g., Iso-Ahola et al., 1994; Robinson & Godbey, 1997),
(2) memory-based examinations of changes in leisure participation subsequent to transitions in life (e.g., Rosenkoetter et al., 2001),
(3) longitudinal research (e.g., Bennett, 1998; Bruce, Seeman, Merrill & Blaszer, 1994; Long, 1987; Stanley & Freysinger; 1995), and
(4) a combination of these methodologies (e.g., Verbrugge et al.,1996).

With the exclusion of studies using a combination of methodologies, none of these methods seem to be complete. Cross-sectional studies can not quantify the effect of intergeneration differences, economic status, or other variables. Memory-based studies might be biased and reasonable doubts exist regarding the reporting credibility especially if respondents are asked to report what happened many years ago. Longitudinal studies can avoid these problems, but findings might be influenced by the changing social and technological environment. Despite these reservations, most studies do show a tendency towards continuity, and therefore provide some support for the behavioral aspect of continuity theory.

Many of the studies that examined individuals' tendency towards continuity (e.g. Iso-Ahola et al., 1994; Robinson & Godbey, 1997) did not classify different life-course phases. Researchers tend not to distinguish between an early retirement phase and a physical disability phase, nor between seniors who retired and those who continue to work. Most studies relate to a population that has passed a certain age. Moreover, some studies referred to the number of activities and others referred to the frequency of participation, but few referred to both. In addition, the psychological aspect of adaptation to aging is missing in many of these studies. They tend to focus on the behavioral aspect only without relating to the psychological impact that continuity and change may have. To draw conclusions about continuity's role in the adaptation process in aging, studies must include psychological measures.

Longitudinal studies that attempted to examine the link between leisure and psychological well-being are relatively rare, but their findings provide some support for the psychological aspect of the continuity theory. For example, Silverstein and Parker (2002) in a 10-year longitudinal study found that older adults who increased their activity participation tended to perceive an improvement in their life conditions. Menec (2003) showed that greater overall activity level was related to greater happiness, better functioning, and reduced mortality. She also demonstrated that different types of activities were related to different outcome measures. Social and productive activities were positively related to happiness, functioning, and mortality, and solitary activities (e.g., handwork, hobbies and reading) were related only to happiness. In a large panel study of volunteer work, Van Willigen (2000) found that older volunteers experienced an increase in life satisfaction as well as positive changes in their perceived health as a result of their volunteering hours and especially with high rates of volunteer work. Duke, Leventhal, Brownlee, and Leventhal (2002) discovered that older adults who replaced a lost activity due to illness had higher positive affect levels one year after onset of illness compared to those individuals who did not replace

such activities. Continuing activity during illness episodes helped maintain positive well-being over time.

Purpose of the Study

My study provides some missing information in the current body of knowledge about aging individuals' tendency towards continuity. The main aim of this study is to further explore continuity's role in the process of adaptation to retirement by examining both perceived changes in behavior as well as psychological benefits. This study builds on Iso-Ahola et al.'s work (1994). However, while Iso-Ahola et al. provided a general understanding of life course changes in leisure, my study focused on the transition to retirement and primarily the first years after retirement. The conceptual framework for this study: (1) relates to retirement as a transition and examines perceived participation in each activity in terms of initiation, termination, and continuity in comparison to the pre retirement period, (2) considers a variety of sociodemographic characteristics, and (3) relates to perceived changes in scope and in frequency.

Scope and frequency are the two primary behavioral dimensions of leisure patterns. Scope represents a person's variety of activities and frequency implies the level of involvement. Although most studies referred to one dimension only, referring to both scope and frequency may provide a clearer picture of the possible perceived changes after retirement. Considering changes in both the scope and frequency of leisure participation creates four theoretical types of perceived post-retirement behavior:

(1) *expanders*—people who report participation in a larger number of activities at a higher frequency,
(2) *reducers*—people who report participation in the same or in fewer activities at the same or at a lower frequency,
(3) *concentrators*—people who report participation in the same, or in fewer activities, but at a higher frequency, and
(4) *diffusers*—people who report participation in a larger number of activities but at the same or at a lower frequency.

Each type represents a different aspect of perceived change. However, the direction of change differs from one type to the other. The only theoretical case for complete stability is for individuals who do not experience change in the scope or frequency of their leisure participation. In such cases, they were included in the *reducers* group since their behavior reflects a pattern of having more free time but using a smaller share for leisure activities.

This study is designed to answer the following questions:

1. What is the frequency of each behavior type? According to previous studies, retirees tend not to participate in more activities. At most, they increase their participation in their previous activities (i.e., most retirees are *concentrators)*. However, the new typology also provides information about older adults who tend to withdraw from activity (i.e., *reducers*) and therefore demonstrate disengagement. A hypothetical minority of innovative retirees may tend to report adding new activities, may experience a re-allocation of their leisure time (i.e., *diffusers*), or may feel that they make use of the additional free time provided by retirement (i.e., *expanders*).
2. Can the four perceived behavior types be differentiated using sociodemographics, health status, or personal history characteristics? If so, can those differences explain each behavior type?
3. Are there differences among the four types in:

(a) Present leisure participation (i.e., higher or lower participation in different leisure activities)?
(b) Life satisfaction (i.e., which type is associated with higher life satisfaction)?

4. What explains differences in life satisfaction among the four types? Is it differing leisure interests, or sociodemographic characteristics?

By addressing these questions, the relationships between leisure behavior and psychological well-being as well as the roles of perceived continuity and change in the process of adaptation to retirement and old age are explored.

Methods

The study used retrospective memory-based examination of changes in leisure participation subsequent to retirement. Budget limitations prohibited the execution of a longitudinal study. The main weakness of the method employed was the inherent risk of inaccuracy associated with self-reported retrospective data. The threats to validity connected with retrospective reports are difficult to detect. Since this study focuses on individuals who retired within the past five years, it reduces concerns about the respondents' reporting credibility that arise when interviewing retirees who retired many years ago (i.e., Rosenkoetter et al., 2001). None of the respondents showed difficulties in recalling activities in the preretirement period. Nevertheless, the reported changes in leisure participation are perceived changes rather than actual changes.

Data Collection and Sample

The study is based on a survey of 383 independent male and female Jewish retirees 50 years and older who retired during the past five years. In-person structured interviews were conducted between May and August of 2002 and took place at the respondents' homes. Closed and open-ended questions were asked regarding: (1) the respondent's present leisure participation as well as during five years prior to retirement, (2) life satisfaction, and (3) background characteristics (e.g., sociodemographics, health perceptions, work status, and personal history). Interviews were conducted by trained middle-aged women and lasted between 30 and 75 minutes, with an average of 45 minutes.

The sampling criteria for the study were: nationality (Jewish), age (50+ years) and retirement status (less than 5 years). Respondents who had officially retired but were still working full time were excluded from the sample. These people had either reached the official retirement age but kept working at the same job, or had retired and found a new job. The screening rationale was based on the assumption that as long as individuals worked full time, their leisure behavior would not significantly change. Retirees who were still working occasionally or part time were included in the sample, and the issue of work status served as a background characteristic.

An interview appointment was established by using phone software based on Israel's complete phone book. It included names, addresses and phone numbers, and enabled sampling by geographic characteristics only of the general Israeli population. Sampling was designed so that all geographic areas in Israel and all sizes of cities and settlements were represented consistent with the data of Israel's Central Bureau of Statistics. About 8,000 people were contacted for interviews. Only 1 of 20 contacts matched the sampling criteria for the study. About 98% of those agreed to participate.

Sample Characteristics

The sample included retirees ranging in age from 50 to 85. Most of them (72%) were 60–69 years old, and the mean was 64.3 years. Fifty-eight percent were female, 78% percent were married, 70% did not have children living at home, 49% percent had at least some post secondary education, and 40% had a relatively high income (over 8,000 NIS a month per household). Fifty-two percent classified themselves as secular, 71% were not born in Israel but only 10% immigrated to Israel after 1970, and 5% were holocaust survivors.

Regarding health, 64% perceived their health as good or very good, 67% classified themselves as being competent to participate in most leisure activities they desired. Fourteen percent reported coping with severe illness during the past two years, and 9% perceived their health as bad or dreadful. Over the past two years 6% had a spouse who had experienced an illness, 10% experienced illnesses of other family members, 2% were widowed, and 12% experienced the death of another family member (i.e., mostly parents).

Seventy-four percent worked full-time before retiring. Forty-six percent retired prior to the official retirement age, and half did so by their own choice. Fifteen percent retired after the official retirement age, and 20% still worked part-time or occasionally.

Measurement

Leisure participation. The interview began with the interviewer reading a list of 41 activities that were used in a former Israeli survey (Katz et al., 2000). Activities included daily (e.g., TV, books, family and friends) and less frequent activities (e.g., theater, cinema, and day trips). Respondents were asked to report their present frequency of participation in each activity using an ordinal scale of 11 degrees from 0 (never) to 10 (more than 4 hours a day). As a result of the range of activities, the scale could not be equal interval data. Instead, participation frequency was pinned into specific intervals (i.e., 1–2 = yearly, 3 = monthly, 4–5 = weekly, 6–10 = daily). This scale was much closer to being an interval scale than the more common ordinal scales that used terms such as: "often," "sometimes," "rarely" and "never," and therefore served as a basis for the inferential statistical analyses that were conducted.

To ensure that all leisure activities were reported, a question referred to "additional activities, not mentioned in the list, which you participate in" and to the frequency of that participation. Less than 10% of the respondents mentioned additional activities. In most cases these additions could be ascribed to activities in the lists (e.g., "gardening" to "physical activity," "babysitting my grandchildren" to "meeting grandchildren"). Later in the interview, they were presented with the same list and following question and asked about their participation during the five years prior to retirement.

Life satisfaction. The full version of the Life Satisfaction Index (LSI) test developed by Neugarten, Havighurst and Tobin (1961) was used to examine the mean life satisfaction score of each individual. This measure was designed specifically for older adults living in the community. It was comprised of 20 statements concerning dimensions of subjective life satisfaction at an advanced age including enjoyment of daily activities, perceiving life as meaningful, a sense of success in achieving principal life goals, a positive self-image, optimism, and general happiness. Sample questions included items such as: "I am just as happy as when I was younger," "I've gotten pretty much of what I expected out of life," and "Most of the things I do are boring or monotonous." Each question had three possible answers: agree, disagree and don't know/not sure. Scores were computed by giving one point for every "agree" answer to positive statements and one point for every "disagree" answer to negative statements. Other answers did not score any points, so that the maximum score was 20 points. This test was translated into Hebrew and validated by Shmotkin (1991).

Background questionnaire. The last part of the interview included a background questionnaire with demographic and sociodemographic questions. The variables examined were age, gender, education, marital status, number of children, whether children lived at home, number of members in the household, household income, spouse's occupation, religious orientation, origin (i.e., place of birth of the respondent and his/her father), residential area (i.e., by telephone area codes), and the size of city/town of residence.

Three questions examined health status: (1) health perception with a 5 degree scale from 1 (very good) to 5 (very bad), (2) perception of physical competence to participate in various leisure activities with a five degree scale from 1 (can take part in any activity) to 5 (can't take part in most activities), and (3) the occurrence of a severe illness during the past two years using only yes/no answer options.

Other questions examined work history (i.e., full or part time, type of occupation), present work status, retirement duration, and retirement pattern (i.e., at official retirement age, early retirement by respondent's own choice, early retirement forced by employer, early retirement as a result of poor health, or late retirement). Other questions checked personal history such as date of immigration to Israel, personal connection to holocaust (i.e., survivor or close relative of survivor), and occurrences of extreme difficulties in the past two years (e.g., spouse's or other family member's illness or death, divorce, etc.).

Data Analysis

Data analysis included a four step process to address the four research questions. The first step was the reported behavior type segmentation. A type index was created by comparing: (1) the number of activities each respondent reported at present and prior to retirement; (2) the frequencies index calculated by summing up reported frequency scores of all activities at each period. If the reported number of activities and the sum of frequencies increased after retirement, the respondent was classified as *expander*. If the number of activities decreased or did not change but the sum of frequencies increased, the respondent was classified as *concentrator*. If the number of activities increased whereas the sum of frequencies decreased or did not change, the respondent was classified as *diffuser*. Finally, if the number of activities decreased or did not change and the frequencies decreased or did not change, the respondent was classified as *reducer*.

The second step in the analysis examined each type according to their background characteristics with the background characteristics as the independent variables and the type segment as the dependent variable. To identify significant associations between behavior type and background characteristics Cross-tabs and Chi-square tests were employed.

The third analysis step examined differences among behavior types regarding present leisure participation and life satisfaction with the type segment as the independent variable and the others as the dependent variables. This step required some preliminary analysis. Comparing each type's present leisure participation in each of the 41 activities tested produced a long and confusing table. To draw a more general picture, factor analysis was conducted on present leisure participation. The factor analysis indicated 13 factors of activity: high culture and dolce-vita, popular culture, spirituality and enrichment, source family, following generation, friends, neighbors, newspapers, computer, independent home activity, free out-door activities, table games, and forever young. Except for the factor called neighbors, all factors included more than one activity. One-way analysis of variance (ANOVA) explored differences in leisure participation among the types in one factor only. These differences were further examined by Least Significant Difference (LSD) test.

Differences among types regarding life satisfaction were tested by one-way ANOVA analysis and LSD test on the mean score of each type. To explain differences in life

satisfaction among the four types and the association between life satisfaction and all the variables in the study was examined in the fourth step of the data analysis. At first, differences in life satisfaction among each one of the background categories were examined separately by one-way ANOVA analysis and LSD tests. Variables that showed significant differentiation in life satisfaction were entered into a linear regression as independent variables along with the 13 factors of activity, and the two variables representing post-retirement perceived changes including the change in the number of activities and the change in the frequency of participation. Life Satisfaction was the dependent variable. The regression analysis was done with the sample as a whole and with each type separately. A confidence interval of 95% was applied for all statistical tests, and only significant findings were selected for presentation in this article because of length limitations.

Results

Frequency and General Behavior of the Four Types

Retirees were not equally divided into the four behavioral types. The largest group, comprising 43% of the respondents, was the *reducers*. The second largest group with 35% of the sample was the *expanders*. The *concentrators* and the *diffusers* were relatively rare, and each one constituting 11% of the sample. Not even one participant demonstrated complete stability (i.e., had no change in scope *and* frequency of leisure participation). Hence, the *reducers* only included retirees who experienced reduction in their activity involvement.

Perceived leisure participation before and after retirement of each type is presented in Table 1. The reported number of activities prior to retirement ranged from 0 to 37 activities, and the sample's mean number of activities was 23. Although the range after retirement changed to 5–39 activities, no significant changes in the sample's mean number of reported activities occurred. The sample's frequencies index ranged from 18–179 prior to retirement, with an average of 82.6. The post-retirement frequencies index ranged from 23–144, and the average significantly increased ($\alpha < 0.05$) to 88.4. This increase represents a general perception of increased activity level after retirement when examining the sample as a whole.

When comparing the participation at each period for each type, two significant differences were found: (1) perceived leisure participation in the *expanders* group was significantly

TABLE 1 Perceived Changes in Leisure Participation by each Type

	Mean Score	Pre Retirement	Post Retirement	Mean Change	Std. Deviation	T
Reducers	Scope	23.71	20.90	−2.81	2.71	−13.24*
	Frequency	88.23	80.88	−7.35	12.23	−7.70*
Concentrators	Scope	25.84	24.79	−1.05	0.99	−6.87*
	Frequency	83.19	95.02	11.83	5.22	14.86*
Diffusers	Scope	21.12	24.31	3.19	5.18	3.99*
	Frequency	89.55	86.05	−3.50	11.38	−1.86
Expanders	Scope	22.45	25.63	3.18	2.39	15.38*
	Frequency	74.37	95.28	20.91	10.72	22.58*
Sample	Scope	23.36	23.22	0.14	4.03	0.70*
	Frequency	82.56	88.45	5.89	16.75	6.85*

*$\alpha < 0.05$.

TABLE 2 Background Characteristics of the Four Types

Type (n)	% of Type				% of Sample N = 383
	Reducers (164)	*Concentrators* (43)	*Diffusers* (42)	*Expanders* (134)	
Education					
0–11 years	35.4	17.5	28.5	24.0	28.7
12 years	24.8	27.5	16.7	18.8	22.1
13 + years	39.8	55.0	54.8	57.2	49.2
Religious orientation					
Secular	46.3	38.1	52.4	65.2	52.6
Traditionalist	38.9	42.9	35.7	24.2	33.9
Religious/orthodox	14.8	19.0	11.9	10.6	13.5
Origin*					
Israel–Israel	9.5	4.9	10.3	11.4	9.7
Israel–Asia / Africa	2.5	9.8	2.6	3.8	3.8
Israel–Europe / America	8.2	12.1	17.9	25.0	15.7
Asia/Africa (both)	50.0	31.7	28.2	28.0	37.8
Europe/America	25.9	41.5	33.3	26.5	28.6
CIS	3.2	0.0	7.7	4.5	3.8
Other	0.7	0.0	0.0	0.8	0.6
Residential area by telephone area codes					
02–East (Jerusalem)	8.5	11.6	14.3	14.9	11.7
03–Tel Aviv area	34.8	30.2	23.8	40.4	35.0
04–North	26.2	20.9	31.0	19.4	23.8
08–South	23.8	27.9	7.1	14.9	19.3
09–West	6.7	9.4	23.8	10.4	10.2
Health perception					
Good–Very good	57.1	72.1	61.9	71.6	64.3
mediocre	28.8	25.6	35.7	20.8	26.5
Bad–Dreadful	14.1	2.3	2.4	7.6	9.2
Leisure capability perception					
Feel that participate in:					
all/most activities	57.6	78.6	70.8	75.0	67.5
some activities	28.2	21.4	22.0	18.9	23.5
few/no activities	14.2	0.0	7.4	6.1	9.0
Suffered a severe illness lately					
No	81.7	86.0	85.7	94.0	86.9
Yes	18.3	14.0	14.3	6.0	13.1

Note. Pearson Chi-square < .05 in all Cross-tabs presented.
*Origin is classified by (a) respondent's place of birth—(b) respondent's father place of birth.

lower than the rest of the groups during the pre retirement period (i.e., their mean frequencies' index was 74.4, while the sample's mean was 82.6), and (2) leisure participation of the *reducers* was significantly lower than the rest of the groups during the post-retirement period (i.e., their mean frequencies' index was 80.9 while the sample's mean was 88.4).

Those two findings were statistically significant ($F = 10.24$, $p = .000$ and $F = 13.02$, $p = .000$, respectively).

Background Characteristics of the Four Types

Five background characteristics were significantly associated with type segmentation ($p < .05$ in Chi-square test): education, religious orientation, origin, residential area, and health status. All three measures of health status (i.e., health perception, perception of physical competence to participate in various leisure activities, and suffering from a severe illness during the past two years) were significantly associated with behavior type. The frequencies of each significant background characteristic in each type segment are presented in Table 2.

The different leisure behavior types had unique characteristics. The *reducers* were characterized by less education, a traditionalist religious orientation, Asian-African origin, residence in peripheral areas of Israel, and by a relatively higher percentage of reported health problems. The *expanders* were characterized by a relatively high level of education, secularity, European-American origin, residence in the Tel Aviv area where more leisure and cultural opportunities exist, and good or very good health. The *concentrators* were characterized by a relatively high level of education, moderate religious or orthodox orientations, European-American origin, residence in southern Israel, and good health. Finally, the *diffusers* were characterized by a relatively high level of education, European-American origin, residence in Northern Israel, and by a mediocre health perception.

Differences in Leisure Participation and Life Satisfaction among the Four Types

Examination of the present participation of each type in the different activity factors, analyzed by factor analysis on the post-retirement frequency of participation data, showed differences in leisure participation among the types in only one activity factor, high culture and dolce-vita. As demonstrated in Table 3, significant differences were found in this specific activity factor between (a) *reducers* and *diffusers*, (b) *reducers* and *expanders*, and (c) *concentrators* and *expanders* ($p = .000$). No significant differences were found between *expanders* and *diffusers* or between *diffusers* and *concentrators*. Therefore, the

TABLE 3 Differences in Post retirement Frequency of Leisure Participation among the Four Types: One-way Analysis of Variance and LSD Tests

Activities Factor	Type	(n)	Mean	Std. Deviation	Std. Error
High culture and dolce-vita (Factor includes: theater, movies, art exhibitions and museums, classical music concerts, vacations abroad, restaurants and cafés, lectures, books, and courses.) $F = 14.76$, $p = .000$	*Reducers*	(164)	-0.33^{ab}	0.90	0.07
	Concentrators	(43)	-0.07^{c}	1.01	0.15
	Diffusers	(42)	0.09^{a}	1.00	0.15
	Expanders	(134)	0.40^{bc}	0.97	0.08
	The sample	N = 383	0.00	1.00	0.05

Note. Means that are significantly different are denoted by "a", "b", and "c."

TABLE 4 Differences in Life Satisfaction Mean Scores between the Four Types: One-way Analysis of Variance and LSD Tests

Type	(n)	Mean Score	Std. Deviation	Std. Error
Reducers	(164)	11.74[ab]	4.36	0.34
Concentrators	(43)	13.49[a]	3.79	0.58
Diffusers	(42)	13.00	3.48	0.54
Expanders	(134)	13.05[b]	4.20	0.36

Note. Means that are significantly different are denoted by "a" and "b".

$F = 3.63$, $p = .013$

expanders and the *diffusers* were the leading participants in activities associated with high culture and dolce-vita, whereas the *reducers* exhibited less participation in those activities in comparison to the other types.

The scores ranged from 0 to 20 for general life satisfaction with a mean of 12.53 ($SD = 4.2$). One-way ANOVA revealed significant differences among the four types regarding the life satisfaction mean score ($F = 3.63$, $p = .013$). The differences were examined by an LSD test. The two tests are presented in Table 4. Results showed that the *expanders* and the *concentrators* showed significantly higher life satisfaction than the *reducers*. The life satisfaction of the *diffusers* did not significantly differ from the rest of the sample.

Explanations for Differences in Post Retirement Life Satisfaction

Since life satisfaction can be affected by various factors, the association between current life satisfaction and other variables was the subject of examination to address the fourth research question. Background variables that showed significant differences in life satisfaction were entered into a linear regression as independent variables along with the 13 factors of activity and two variables representing post-retirement perceived changes (i.e., the change in the number of activities and the change in the frequency of participation). Life Satisfaction was the dependent variable. The regression analysis was done with the sample as a whole and with each type separately. Regression results are presented in Table 5.

Results indicated that the life satisfaction of each type was associated with different variables. For each type, different background and/or activity factors had a significant relationship to life satisfaction. However, a central finding, which was consistent for all analyses, was that the degree of perceived change had *no impact* on post-retirement life satisfaction. The frequency of participation after retirement in different activity factors mattered. Therefore, not the reported change per-se but its results affected subjective well being. Moreover, the positive impact of leisure participation did not characterize all activity types. For the sample as a whole, life satisfaction was only affected by activities included in the following factors: high culture and dolce-vita, popular culture, spirituality and enrichment, source family, following generation, and free out-door activities. Those life satisfaction generating factors differed for each type.

The results of the regression analyses explained differences in life satisfaction among the four types via different variables. *Expanders*' high life satisfaction may be explained by good health and their relatively frequent participation in high culture and dolce-vita activities. The low life satisfaction of the *reducers* may be explained by the relatively high rate of participants who reported poor health and their low participation in high culture and dolce-vita activities. Since the other two groups were small, life satisfaction scores cannot be

TABLE 5 Association of Respondents' Background, Perceived Leisure Participation and Post Retirement Changes in Leisure participation, with Life Satisfaction Scores: Summary of Linear Regression Analyses[a]

	Reducers (n = 164)	*Concentrators* (n = 43)	*Diffusers* (n = 42)	*Expanders* (n = 134)	Sample (n = 383)
Change in number of activities	−0.009	−0.076	0.163	−0.030	−0.019
Change in frequency of participation	0.029	0.202	0.138	0.004	0.007
High culture and dolce-vita	0.203**	0.232	0.500***	0.297***	0.249***
Popular culture	0.015	0.107	0.123	0.155*	0.099*
Spirituality and enrichment	0.158**	0.309*	0.096	0.125	0.140**
Following generation	0.201**	0.191	0.066	0.026	0.141**
Newspapers	0.028	0.232	0.036	0.048	0.026
Free out-door activities	0.149*	0.090	−0.119	0.204**	0.145***
Computer	0.011	0.115	−0.094	−0.122	−0.048
Friends	0.048	0.048	0.034	0.017	0.029
Forever young	−0.012	0.069	0.087	0.016	0.004
Source family	0.062	0.163	0.067	0.025	0.068
Independent home activity	0.132*	0.107	−0.044	0.017	0.078
Neighbors	0.080	−0.006	0.030	−0.243***	0.034
Table games	0.033	−0.095	0.077	0.226**	0.079
Education	0.065	0.226	−0.038	−0.071	−0.020
Income	0.130**	−0.143	−0.049	0.219**	0.080
Family status	0.125	−0.043	0.140	0.055	0.142**
Religious orientation	0.050	−0.034	−0.054	−0.065	0.037
Retirement pattern	−0.010	0.120	0.047	0.111	0.091*
Spouse's illness	−0.124*	−0.333*	−0.183	−0.030	−0.121**
Health perception	0.372***	0.124	0.071	0.275***	0.339***
R square	0.440	0.239	0.250	0.506	0.394
F score	15.208	6.290	13.338	18.439	27.001
Sig.	0.000	0.004	0.001	0.000	0.000

[a] Numbers presented are beta coefficients.

Note. All variables concerning health were significant to life satisfaction so health perception, which showed the highest differentiation, was chosen.

Dummy codes. Marital status: 1 = married, 0 = not married, Religious orientation: 1 = secular, 0 = religious; Retirement pattern: 1 = by respondent's own choice, 0 = forced retirement.

$^{***}p < .001$, $^{**}p < 0.01$, $^{*}p < .05$.

explained based on the regression analyses. However, by referring to the sample's analysis, some of the high life satisfaction of the *concentrators* could be explained by their good health. The mean score of the *diffusers* may be explained by their relatively high frequency of participation in high culture and dolce-vita activities, which might have contributed to their life satisfaction. However, since a relatively high percentage of this group tended to report a mediocre health status, the positive influence of their leisure participation was probably neutralized, which generated an average level of life satisfaction.

Discussion

This study had some limitations as a result of using retrospective memory-based examination of changes in leisure participation subsequent to retirement. The main weakness of the method employed was the inherent risk of inaccuracy associated with self-reported retrospective data. Although none of the respondents showed difficulties in recalling activities in their preretirement period, the results indicated differences in perceptions of behavior rather than change or stability over time. Therefore, this study's results should be interpreted cautiously. Yet, the results do suggest that retirees differed in post-retirement perceived changes in leisure behavior. Results also suggested that different patterns of perceived change showed different relationships to subjective well being.

While Iso-Ahola et al.'s (1994) work provided a general understanding of life course changes in leisure, my study focused on the transition to retirement within the first years after retirement. Therefore, perceived changes in leisure participation were examined in terms of outset, termination, or continuity in comparison to the preretirement period, and not to the last year as Iso-Ahola et al. did. Moreover, relating to changes in scope and in frequency led to a new typology that substituted for Jackson and Dunn's types (1988) used in Iso-Ahola et al.'s study. In addition, combining the examination of perceived behavioral changes with measuring life satisfaction added a new dimension to the study.

Iso-Ahola et al. (1994) examined continuity and change in leisure from the behavioral aspect only and did not consider the impacts of different behaviors on psychological well being. The combination of examining both perceived changes in activity (i.e., behavioral) and life satisfaction (i.e., psychological) incorporated in my study served as a basis for several substantial arguments regarding the contribution of perceived continuity and change to well-being after retirement. Some of these arguments challenge three of the main theories related to advanced age leisure including the disengagement theory, the activity theory, and the continuity theory.

The disengagement theory (Cumming & Henry, 1961) argued that withdrawing from society for elderly people is essential to the self and to personal growth. According to the findings of my study, the tendency to withdraw does not describe all retirees. Among the four groups identified, only the *reducers* reported behavior that could be described as withdrawing. The disengagement theory would have gained support if the findings had revealed that the *reducers* had high psychological well-being. However, *reducers*' life satisfaction was significantly lower than the rest of the groups and strongly contradicted this theory at least in the case of relatively young retirees. Respondents in this study were relatively young and disengagement may become both significant and positive in later life as resources decline.

Based on the *reducers*' background characteristics, this group seemed to suffer more than the others from constraints on leisure including: (a) lack of opportunities (e.g., a high percentage of *reducers* in comparison to the other groups resided in peripheral areas of Israel with less leisure and cultural opportunities than Tel Aviv and Jerusalem), (b) poor health (i.e., *reducers* had the highest percentage of reported health problems, and (c) cultural and

socio-demographic background (i.e., *reducers* were characterized by a relatively less education, traditionalist religious orientation, and Asian-African origin). Those same characteristics were associated with a relatively limited leisure repertoire in a former Israeli study (Katz et al., 2000). Some of the suggested constraints may explain *reducers*' behavior regarding post-retirement leisure. However, since constraints were not measured in this study, results cannot confidently dispute McGuire and Norman's (2005) suggestion that constraints on leisure can be viewed as positive factors in successful aging.

The *concentrators* also reported some withdrawal from activities and their higher life satisfaction provided some support for the disengagement theory. However, such a conclusion is misleading since *concentrators* also reported a higher frequency of participation. A better theoretical framework for this type would be the SOC model (Baltes & Baltes, 1990; Baltes & Carstensen, 1996; Freund & Baltes, 1998, 2002). C*oncentrators* seem to use strategies of selection and optimization by choosing the activities that were most meaningful for them and expanding the frequency of participation in those activities. Based on this group's background characteristics, this group appeared not to suffer from constraints on leisure. Therefore, their selection was probably triggered by intrinsic motives. In any case, the outcome of their strategies was successful as evidenced by their high satisfaction with life.

This study supported activity theory (Havighurst, 1963). The principal supporting findings address the differences in life satisfaction among the four types. The *expanders* and the *concentrators*, the two most active groups, had the highest life satisfaction. In comparison, the *reducers* reported less activity both in comparison to other groups and compared to their activity prior to retirement and had the lowest life satisfaction. Thus, my study confirmed the positive association between activeness and well-being. However, the positive impact of leisure participation did not characterize all activity types. Only 5 out of 13 activity factors had a significant impact on life satisfaction in the whole sample. Moreover, activity factors positively associated with life satisfaction differed for each type. These findings provide an important clarification for activity theory. While the theory argues that to preserve psychological well-being at advanced age requires maintaining a high level of involvement in various activities, the findings of my study suggested that maintaining a high level of involvement is only important in specific activities that contribute to life satisfaction. Those activities may vary in different population groups.

Continuity theory (Atchley, 1989) emerged from a wide consensus that older individuals tend to maintain continuity of psychological and social patterns adopted during their life course. Although some studies supported this theory with evidence that retirees tend to keep early patterns of leisure behavior (e.g, Atchley, 1993; Robinson & Godbey, 1997; Verbrugge et al., 1996), and provided some support for the psychological benefits of continuity (e.g., Duke et al., 2002; Menec, 2003; Silverstein & Parker, 2002; Van Willigen, 2000), researchers often have ignored individuals' inclinations (i.e., types segmentations). Focusing on type segmentation enables to distinctly characterize retirees' inclination towards continuity.

If continuity is defined in post-retirement leisure as participation in the same activities as before retiring at the same level or at a higher frequency, then only a minor part of the retirees, *concentrators*, reported a pure tendency toward continuity. The findings of this study indicated that the number of retirees who experienced drastic changes in their post-retirement leisure was considerable. Approximately one-third of the sample was comprised of the *expanders*, who expanded their participation in leisure activities and demonstrated a strong tendency for innovation. By combining the *diffusers* with the *expanders*, more than half of the retirees participated in a larger number of leisure activities than before, which is a finding that practically contradicts previous studies (e.g., Iso-Ahola et al., 1994; Kelly, 1983; Long, 1987). In addition, the findings from my study identified *reducers* as the largest

group in the sample. Apparently, considerable differences exist among the four types. All types including the most innovative ones reported that they continued to participate in many of their former leisure activities. In addition, each type experienced changes in its participation patterns. The direction of those changes, however, varied considerably from one type to another. Those perceived changes had no impact on post-retirement life satisfaction. The outcome of those changes including the reported frequency of post-retirement leisure participation in significant activities mattered.

These findings call for new ways to adapt to retirement. Although all groups were fairly close in their life satisfaction scores, which indicated that all had a rather average level of life satisfaction, two types enjoyed a significantly higher life satisfaction than the others. Therefore, claiming two ways to reach higher levels of life satisfaction by being *concentrators* and *expanders* is reasonable. In the case of the *concentrators*, psychological well-being was achieved by continuity and SOC strategies. Achieving psychological well-being after retirement was exemplified by the *expanders* not only by increased involvement in leisure activities but also by trying new activities and extending their scope of activities. For many of the *expanders* retiring from work actually represented an opportunity for new experiences. As they left their job role, they dedicated the additional free time they gained to exploring and enjoying what leisure had to offer. The *expanders* approach seemed to result in an outcome as successful as that of the *concentrators* (i.e., high life satisfaction).

The expander approach to adapting to retirement has not yet obtained a suitable theoretical context. This group's search for innovation might suggest that parallel to continuity, which is essential to the process of adapting to the changes characterized by advanced age, participating in new activities and discovering new experiences is important. It is particularly significant for people who had a relatively limited leisure repertoire prior to retirement, as the *expanders* did. Innovation may assist retirees in reaching a high level of leisure participation after retiring, and achieving a higher life satisfaction as a result. Moreover, innovation may have other positive impacts on well being, by assisting retirees in successfully coping with the challenges of advanced age. First, innovation creates opportunities to develop new skills, to confront new challenges, and experience greater satisfaction. Second, innovation may enable a retiree to discover ways to answer the different needs that emerge as a consequence of the new life phase circumstances. Third, innovation undermines the stereotypes associated with advanced age, and may help the retiree who may not be old chronologically or functionally, to preserve a young, vital, energetic, and active self-image. In that sense, *external innovation* in leisure behavior may hold potential for internal continuity (Atchley, 1993) of the young self and identity.

The type segmentation suggested in this study may serve as a framework for further studies that examine continuity and leisure during the life course and in old age. The method can be used to examine real or perceived changes due to other transitions in life. For younger populations, these transitions could be marriage, child birth, or job loss. In older age, the significant transitions might include becoming a grandparent, widowhood, or the emergence of an acute or chronic physical disability. Of particular interest would be a follow-up survey, which would explore continuity over time. This type of study could determine whether *expanders* start to concentrate, if *reducers* continue to reduce participation, and what occurs within the *diffusers* group. Another issue to be explored is the national/cultural context of the study. Would the findings apply everywhere or would they differ in various countries? Moreover, the dynamics and benefits of innovation are yet to be examined. Although my study demonstrated a positive association between innovation and well-being, other aspects of advanced age innovativeness require further study. For example, what motivates innovation, what constrains innovation, which leisure channels attract innovations, and what

benefits result from diverse innovations? My research suggests a new agenda to address the issue of post-retirement leisure that will explore and encourage innovation.

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