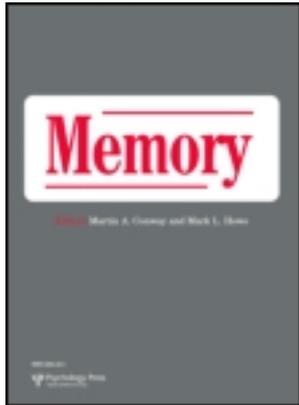


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When does meaning making predict subjective well-being? Examining young and older adults in two cultures

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Two studies in different cultures (Study 1: USA, $N = 174$, Study 2: Trinidad, $N = 167$) examined whether meaning making, (i.e., both searching for meaning, and directing behaviour) is positively related to subjective well-being (SWB) by age (younger, older adults). In both studies, participants self-reported engagement in meaning making, and SWB (e.g., affect, future time perspective, psychological well-being). In Study 1, young Americans (compared to older) more frequently used their past to direct behaviour but doing so was unrelated to SWB. In older Americans, both types of meaning making were positively associated with SWB. In Study 2, Trinidadian younger adults were again more likely than older adults to engage in meaning making. Unlike in the American sample, however, directing behaviour was positively related to SWB for both young and older adults. The studies demonstrate that whether meaning making shows benefits for SWB may depend on type of meaning, age and culture. Note that although meaning making was sometimes unrelated to SWB, no detrimental relations to meaning making were found. The discussion focuses on the role of moderators in understanding when meaning making should lead to benefits versus costs to SWB.

Keywords: Meaning making; Directive function; Subjective well-being; Adulthood; Culture.

Humans have a strong desire to make sense of the events that have happened to them in their life, to make the past meaningful. Whether such meaning making predicts subjective well-being (SWB), however, is debatable. In keeping with the theme of this Special Issue, the research reported here attempts to clarify when meaning making is beneficial, and when it might not be, in two major ways. The first clarification involves the conceptualisation and measurement of meaning making. The relation between meaning making and SWB may depend on the type of meaning being made

(e.g., lessons learned, Bluck & Glück, 2004; insights gained, McLean, 2005) and type of events recalled (e.g., high and low points, McLean & Lilgendahl, 2008; self-defining memories; Singer, Rexhaj, & Baddeley, 2007). To address this, meaning making was operationalised in the current studies as *the overall frequency* with which people self-report making meaning of life's events (i.e., across event types), delineating between two different components of meaning making: searching for meaning in the past, and using the past to direct behaviour.

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The second way that we attempt to clarify the ambiguous results about whether meaning making is beneficial or costly to SWB is by examining whether this relation varies depending on one's age and cultural context. In the first study, age (i.e., younger and older adults) is examined as a moderator of the relation between meaning making and SWB, extending previous work that has focused on early life phases (e.g., Fivush, Sales, & Bohanek, 2008; Kulkofsky, Wang, & Koh, 2009; McLean & Breen, 2009) to older adults (see also Blagov & Singer, 2004; Lilgendahl & McAdams, 2011; Pratt, Norris, Arnold, & Filyer, 1999). The second study explores whether the relation between meaning making, SWB and age found in the United States (US) would be similar to data from a developing country, Trinidad and Tobago (TT).

USING ONE'S PAST TO SEARCH FOR MEANING AND DIRECT BEHAVIOUR

Meaning is "what one gleans from, learns, or understands" about past experiences (McLean & Thorne, 2003, p. 636). Meaning making has been operationalised in a number of ways, such as gaining insight (e.g., McLean, 2005), learning life lessons (e.g., Bluck & Glück, 2004), integrating life events (e.g., Singer et al., 2007) and with the use of linguistic markers (Pennebaker, Mehl, & Niederhoffer, 2003).¹ In the studies presented in this paper, two components of meaning making, *searching for meaning* and *using memory to direct one's behaviour*, are distinguished so as to examine whether they show differential relations to SWB.

The view that humans *make* use of the past (i.e., meaning making; Singer, 2004) implies that one *searches* volitionally for meaning, purpose or significance in their life's events (Steger, Kashaan, Sullivan, & Lorentz, 2008). This ability develops in late adolescence (Habermas & Bluck, 2000; McAdams, 1988): With the emergence of abstract thinking (Piaget, 1965), one can engage in auto-

biographical reasoning (Habermas & Bluck, 2000; also narrative processing, Singer & Bluck, 2001). Thus, one component of meaning making is *searching for meaning*. The individual is searching for an explanation, for understanding, or for life to make sense or have meaning. In doing so, the person looks to past events. The answers found can "establish and/or augment" the meaning of one's life (Steger et al., 2008, p. 200). Assessments of searching for meaning have focused on content analyses of autobiographical narratives in order to capture rich meaning making that is local to specific events (Mackay & Bluck, 2010), as well as on self-reported tendencies to search for and to find meaning in life more generally. This latter work has no direct link to searching for meaning through memory processes or reviewing one's past (Meaning in Life Questionnaire; Steger, Frazier, Oishi, & Kaler, 2006).

The second type of meaning making investigated here is less straightforward. Rooted in research on the adaptive function of human memory (Baddeley, 1988; Bruce, 1989; Neisser, 1978), we suggest that meaning making can also be conceptualised in terms of using one's personal past to *direct behaviour* (Bluck & Alea, 2011).² The directive function of autobiographical memory (Bluck & Alea, 2002; Cohen, 1998; Pillemer, 1992) involves using one's personal past to guide present problem solving (e.g. Pillemer, 2003; Webster, 1997) and direct future thoughts and behaviours (e.g., Beike, Adams, & Naufel, 2010; Bluck, Dirk, Mackay, & Hux, 2005). In using autobiographical memory directly, life events are not purposively searched and evaluated in an effort to make meaning. Instead, using autobiographical memory to direct behaviour, by definition, involves past experiences becoming meaningful in the service of directing present and future behaviour. This requires adaptively reconstructing the past in order to make it meaningful for responding to ongoing changes in one's ecological context (Bluck, Alea, & Demiray, 2010). The directive function of memory

¹ We recognise research that has linked meaning making to subjective well-being using linguistic analyses (e.g., Fivush et al., 2008; Pennebaker & Francis, 1996; Rice & Pasupathi, 2010). This work is not reviewed here because we adhere to the view that meaning is garnered through remembering and reasoning about autobiographical events (Freeman, 2010), and linking these events across time through autobiographical reasoning (Bluck & Habermas, 2000). It is not clear with the current literature whether word counts of cognitive processes in narratives adequately represent our view of meaning making.

² Using the past as a directive is closely aligned with what McLean and others call "learning lessons" (e.g., Bluck & Glück, 2004; McLean & Pratt, 2006; McLean & Thorne, 2003). We link the literature on learning lessons with using the past to direct behaviour in the current studies. Further, in previous research, lesson learning and gaining insights (which is more closely aligned with searching for meaning) from the past are often measured on a continuum (e.g., Alea, McLean, & Vick, 2010; McLean & Pratt, 2006), not allowing for distinctions to be made.

is typically measured by self-reports of the frequency of using autobiographical memory to serve directive purposes in everyday life (e.g., Thinking About Life Experiences Scale, TALE; Bluck & Alea, 2011). For parsimony, self-report methodology is adopted in the current research for assessing both types of meaning making: searching for meaning and directing behaviour.

SEARCHING FOR MEANING AND DIRECTING BEHAVIOUR: ADULT AGE GROUP DIFFERENCES

Lifespan theorists have long proposed that old age is a time for reviewing (Butler, 1963) and making meaning of one's life so that life will end with a sense of integrity and well-being (Erikson, 1968). This is confirmed empirically: Integrative meaning in American's self-defining memories (Singer et al., 2007), and high, low, and turning point memories (Bauer, McAdams, & Sakaeda, 2005) is greater in late life, compared to earlier in adulthood. The pattern is similar when Americans are asked to remember a critical moral incident and rate the extent to which they learned specific lessons (e.g., about the self) from the experience that were integrated in to their life story (Pratt et al., 1999). Work on finding meaning (not searching for meaning) further indicates that older adults are more likely to have found meaning in their life compared to younger aged groups (Steger et al., 2009). Some research, however, with a lifespan American sample finds no age differences in searching for meaning in relationship-defining memories (Alea et al., 2010). Thus, although the content of the event being remembered and the outcome of the search may influence when adult age differences are found, the overall pattern of results suggests that older adults are more likely to search for meaning in past events than are younger adults.

This increase in meaning making with age, however, does not seem to extend to the frequency of using the past to direct behaviour. North American young adults self-report using the past as a directive more often than older adults (e.g., Bluck & Alea, 2009; Webster, 1995; Webster & McCall, 1999). A similar age pattern has also been found in a German sample recalling autobiographical wisdom-related events (Bluck & Glück, 2004). Thirty- to 40-year-olds, compared to adolescents and older adults, were more likely to

report lessons learned. Age differences, however, are not always found (McLean & Lilgendahl, 2008). Even so, it seems that young adults engage more in using the past as a directive, compared to older adults. This is consistent with lifespan developmental theory (Baltes, 1987) that posits young adulthood as a time of growth, in which one is focused on developmental goals that may affect adult life (Ebner, Freund, & Baltes, 2006; Neugarten, 1996). These differential age results for searching for meaning (higher in older adults) and using the past to direct behaviour (higher in younger adults) may be one reason for inconsistent results with regards to costs and benefits of meaning making.

RELATION OF SEARCHING FOR MEANING, AND DIRECTING BEHAVIOUR, TO SUBJECTIVE WELL-BEING: CONSIDERING AGE

Subjective well-being is a multidimensional (i.e., emotional and cognitive) facet of human functioning (Pavot & Diener, 2004) and may thus relate differently to searching for meaning and using the past to direct behaviour. The relation between searching for meaning in autobiographical events and SWB has been studied in clinical populations (Brown & Augusta-Scott, 2007), in response to stressful life experiences (Park, 2010), and as a normal process of narrating one's life story (McAdams, 2001). It is the normative use of meaning making and its relation to SWB that is considered here and reviewed below. Several studies in North America find that there are benefits to searching for meaning in past events. Searching for meaning is positively related to SWB indicators in adulthood (e.g., relationship satisfaction, Alea et al., 2010; self-restraint, Blagov & Singer, 2004; well-being, Lilgendahl & McAdams, 2011; Mansfield, McLean, & Lilgendahl, 2010; emotional health and stability, Lodi-Smith, Geise, Roberts, & Robins, 2009; moral reasoning, Pratt et al., 1999). Some of the strongest evidence for the positive relation comes from a longitudinal study by Pals (2006). American women who were 52 years old shared narratives about difficult life events and, at 61, reported on several aspects of SWB (e.g., life satisfaction, positive self-transformation). Searching for meaning in events predicted higher levels of SWB years later (see also Lilgendahl & McAdams, 2011). This positive

association between searching for meaning and SWB seems to be stronger for older Americans (Bauer et al., 2005). Further, older adults are more likely than younger age groups to have found meaning in their life, which is positively related to various aspects of SWB (Steger et al., 2009).

There is very little work examining whether using the past as a directive is related to SWB. The pattern of results, however, seems to also favour older adults. Older North Americans who use low point memories to solve present problems report greater SWB (i.e., purpose in life; McLean & Lilgendahl, 2008). No relation was found for younger adults. Other research substantiates this positive relation between using memory as a directive for behaviour and positive well-being in later life for North Americans (Wong & Watt, 1991). It is important to note that not all research has found positive associations between meaning making and SWB (e.g., McLean, Breen, & Fournier, 2010; Nolen-Hoeksema, McBride, & Larson, 1997; Roberts, Lepore, & Helgeson, 2006; Webster & McCall, 1999). However, when negative associations with SWB are found it seems to be early in life (e.g., McLean et al., 2010), in adolescence, when the ability to reason about autobiographical events has not fully developed (Habermas & Bluck, 2000). Costs to SWB associated with meaning making seem to also exist when the meaning making is tied to specific types of challenging life events (e.g., bereavement, Nolen-Hoeksema et al., 1997; cancer diagnosis, Roberts et al., 2006). Thus, (1) examining age as a moderator and (2) assessing how often (i.e., overall frequency) individuals make meaning of life's events in general (as opposed to meaning making tied to specific types of life events), should provide a step forward in understanding when meaning making is, and is not, related to SWB.

STUDY 1

Aims and expectations

The first study explored the tendency for people to make meaning of the past at different points in the lifespan (i.e., young and older adulthood) in an American sample. There were two aims. The first was to determine whether there were age group differences in the two components of meaning making: searching for meaning and directing behaviour. Both components were mea-

sured with quantitative Likert-scale assessments of the general tendency to make meaning from one's past. Using this method, older adults are expected to report searching for meaning more than younger adults. In contrast, younger adults are expected to use the past more frequently as a directive, compared to older adults. The second aim was to examine whether the two components of meaning making predict SWB, and, if so, whether age moderates these relations. Past research suggests that meaning making (both searching for meaning and directing behaviour) will be positively related to SWB for older adults, but it is unclear whether meaning making is related to SWB for younger adults.

Methods

Participants

There were 174 participants (47% male, 53% female) from the Southeastern United States. Eighty-one per cent reported ethnicity as Caucasian, 8% reported African American, 5% Hispanic, 4% Asian American and 2% reported ethnicity as "Other". Younger adults ($n=89$) ranged from 17 to 29 years old ($M=19.08$, $SD=2.13$) and older adults ($n=85$) ranged from 60 to 91 years old ($M=73.09$, $SD=7.63$). As usual in US studies, older adults ($M=22.39$, $SD=4.51$) were more educated than younger adults ($M=14.85$, $SD=2.13$), $t(172)=12.52$, $p<.001$. There was no age group difference in American's ratings of subjective health compared to peers (young adults $M=5.15$, $SD=0.67$; older adults $M=5.20$, $SD=1.03$), $t(172)=0.44$, $p>.05$. Young adults were mostly university students compensated with research credits towards their grade in a course or US\$10. Older adults came from community organisations and were not compensated.

Procedure and measures

Female research assistants followed standardised scripts in running participants' sessions in moderately sized groups in quiet, comfortable university rooms or community settings. Participants were guided to complete questionnaires and researchers answered questions as needed. The SWB measures were administered first, followed by the meaning making items (searching for

meaning, and directing behaviour) in random order. Three groups of measures were given.

Background and control variables

Three demographic variables were assessed: gender, education and subjective health. Education was assessed as the total number of years in formal schooling. Subjective health was measured with one item asking individuals to rate their health from 1 (“very poor”) to 6 (“very good”) compared to own-age peers (Maddox, 1962). The overall frequency of thinking about the past, and of talking about the past were also assessed using two baseline items from the TALE (Bluck & Alea, 2011) to consider as control variables in analyses. These responses are made on Likert-type scales ranging from “almost never” (1) to “very frequently” (5).

Meaning making in memory

Two sets of items assessed the frequency with which individuals use autobiographical memory in an attempt to make meaning. The first, searching for meaning, focuses on the frequency with which individuals use autobiographical memory to search for meaning by linking the past and present so as to make sense of one’s life now. The second, directing behaviour, assesses the frequency of using autobiographical memory to guide current and future actions through lessons learned in the past. The scales were developed based on a review of theoretical and empirical work regarding use of autobiographical memory in daily life. The instructional set for both measures is the same, and focuses participants not on individual life events but on how they connect the events of their life. The stem is, “I think back over or talk about my life or certain periods of my life [when]...” Responses are made on 5-point Likert-type scales ranging from “almost never” (1) to “very frequently” (5).

Searching for meaning. Six items assess how often people use autobiographical memory to search for meaning. Items include: “when I don’t understand something that is happening in my life”; “when something unusual happens and I want to understand what role it plays in my life”; “when I see that thinking about the past puts the present in a new light”; “when I want to make sense of my life”; “when I want to see the meaning of my life”; “when I am trying to find

an explanation for something that is going on in my life now”. Note that these items are not part of the TALE (Bluck & Alea, 2011).

Directing behaviour. The directing behaviour items are from a subscale of the TALE (Bluck & Alea, 2011) and assess how frequently people use their past to guide future goals and behaviour. Items include: “when I want to try to learn from my past mistakes”; “when I believe that thinking about the past can help guide my future”; “when I want to remember something that someone else said or did that might help me now”; “when I need to make a life choice and I am uncertain which path to take”; “when I want to remember a lesson I learned in the past”.

Factorial equivalence across age groups. Multiple group confirmatory factor analysis (CFA) was conducted using AMOS 5 (Arbuckle, 2003) to examine whether the model had factorial equivalence across age groups before proceeding to mean-level comparisons. The CFA also allowed us to test whether a two-factor model (i.e., searching for meaning and directing behaviour), as specified above, was a good fit to the data. The following criteria were set for the model (Anderson & Gerbing, 1988): Each indicator loaded only on a single factor, factors were scaled by fixing the loading of one indicator per factor equal to 1.0, measurement errors were not allowed to correlate, and the two factors were allowed to covary. Parameters were estimated using a maximum likelihood method (Byrne, 2001; Kline, 1998). Two model comparisons were made: the unconstrained model, which had no constraints across the two age groups, and a constrained model, where the factor loadings across the age groups were made invariant (Kline, 1998). Results for the two models are provided in Table 1.

Models were evaluated using several diverse goodness-of-fit indices. These include: Chi-square (CMIN), Chi-square/degrees of freedom ratio (CMIN/DF), Incremental Fit Index (IFI), Comparative Fit Index (CFI), and Root-Mean-Square Error of Approximation (RMSEA). Details concerning acceptable fit for a model based on the literature (e.g., Bentler & Bonett, 1980; Bollen, 1989; Byrne, 2001; Kline, 1998) are reported in the note to Table 1. As can be seen, the two-factor model, both the unconstrained and the model that was constrained to contain equivalent factor loadings across the age groups, meet the criteria for an acceptable fit. Of importance here is that

TABLE 1

Confirmatory factor analyses examining age and cultural invariance of the meaning-making measures: Unconstrained and constrained models

Models	Results for age invariance (Study 1)						
	CMIN	DF	CMIN/DF	IFI	CFI	RMSEA	Chi-square difference
Unconstrained	137.943*	86	1.60	.91	.91	.06	2.794
Constrained	140.737*	95	1.48	.92	.92	.05	(df = 9)
	Results for age invariance (Study 2)						
Unconstrained	221.74*	86	2.58	.82	.82	.09	6.13
Constrained	227.87*	95	2.40	.83	.82	.09	(df = 9)
	Results for cultural invariance (Study 1 and Study 2)						
Unconstrained	246.667*	86	2.87	.88	.88	.07	13.214
Constrained	259.881*	95	2.74	.87	.87	.07	(df = 9)

CMIN: Nonsignificant CMIN indicates better fit though the value increases and tends to be significant with large sample sizes. CMIN/DF: values <3 are considered favourable. IFI: Values above .90 are acceptable. CFI: Values close to 1 indicate a very good fit and values above .90 are favourable. RMSEA: Values <.05 indicate very good fit, though reasonable up to .08. Nonsignificant chi-square difference test is indicative of invariance. * $p < .001$.

the model is invariant across the two age groups. The Chi-square difference test (see Table 1) was nonsignificant, indicating that the constrained model, which equated factor loadings across the two age groups, was not significantly different from an unconstrained model. Standardised regression weights were in acceptable ranges: young adults' standardised weights for searching for meaning (in the order of the questions given above) = .65, .66, .72, .70, .71, .72, and for directing behaviour = .50, .77, .60, .68, .33; older adults' weights for searching for meaning = .47, .68, .69, .64, .64, .61, and for directing behaviour = .57, .68, .52, .56, .29. The measures were also internally consistent. Cronbach's α was .82 for the searching for meaning measure, and .73 for using the past to direct behaviour.

Subjective well-being

Positive and negative affect. Affect, an inherent component of psychological well-being (Diener, Oishi, & Lucas, 2003), was assessed with the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS has two 10-item subscales. Positive affect refers to a state of emotional well-being (e.g., excited, enthusiastic) and negative affect refers to a state of emotional distress (e.g., upset, ashamed). Thus, although mostly positive relations between meaning making and well-being were expected, including the PANAS allowed us to concretely examine potential negative affective costs associated with meaning making. Participants rate words or

phrases representing how they currently feel on 5-point Likert-type scales, from "very slightly or not at all" (1) "to extremely" (5). Cronbach's α was .88 for positive and .86 for negative affect.

Optimistic future time perspective. The Future Time Perspective Scale (FTP; Carstensen & Lang, 1996) not only assesses how much time one sees in the future, but particularly focuses on the extent to which participants see their future as positive and full of possibilities. There is a growing body of work showing that future time perspective is related to SWB indicators (e.g., happiness, Yeung, Fung, & Lang, 2007; life satisfaction, Fingerhut & Perlmutter, 1995; see also Drake, Duncan, Sutherland, Abernethy, & Henry, 2008), and may be a particularly salient aspect of SWB when younger and older adults are examined (e.g., Demiray & Bluck, 2012). Responses to the 10-item measure (e.g., "My future is full of possibilities", "Many opportunities await me in the future") are made on Likert-type scales ranging from "very untrue" (1) to "very true" (7). The FTP has shown good reliability and validity (e.g., Lang & Carstensen, 2002). Cronbach's α was .89.

Results

Preliminary analyses

Preliminary analyses identified appropriate control variables. Variables were considered for inclusion as controls in major analyses based on relations with age, meaning making and SWB.

TABLE 3

Summary of hierarchical regressions examining whether meaning-making predicts positive affect and future time perspective (American sample)

Predictors	R^2	B	SEB	β	t
<i>Positive affect</i>					
Step 1: Control variables	.34***				
Step 2: Meaning-making	.35				
Searching		1.05	0.69	.10	1.51
Directing behaviour		-0.79	1.03	-.05	-0.77
Step 3: Age as moderator	.38*				
Searching \times Age		0.07	0.03	.20	2.88**
Directing behaviour \times Age		-0.02	0.02	-.19	-0.78
<i>Future time perspective</i>					
Step 1: Control variables	.42***				
Step 2: Meaning making	.47***				
Searching		3.77	1.04	.23	3.72***
Directing behaviour		0.14	1.50	.01	0.10
Step 3: Age as moderator	.50**				
Searching \times Age		6.19	2.11	.19	2.93**
Directing behaviour \times Age		-0.08	0.03	-.51	-2.38*

Results for negative affect are excluded; nothing was significant beyond control variables. Coefficients for control variables have been omitted (see Table 2 for the pattern of relations between control variables and SWB). Including additional variables in the model at each step does not change results from previous step. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

$\eta^2 = .01$. Thus, young and old Americans search for meaning in the past to a similar extent (young $M = 3.12$, $SD = 0.82$; old $M = 2.89$, $SD = 0.77$).

Meaning making as a predictor of subjective well-being: Age as a moderator

Hierarchical regression analyses were conducted to examine whether the two components of meaning making would predict SWB, and, if so, whether age would moderate such relations. For all analyses, control variables entered in the first step of the regressions included (see correlations in Table 2): education, subjective health, overall frequency of thinking about, and of talking about one's past, as well as the age main effect.⁵ The meaning making variables (i.e., searching for meaning, and directing behaviour) were examined as predictors of SWB in the second step of the regression. Directing behaviour was entered as a residualised variable to remove the variance shared with searching for meaning and to avoid multicollinearity (Aiken & West, 1991). The searching for meaning variable, which was entered first in the regression equation, was not residualised and thus subsumes the variance also contained in the process of meaning making by directing behaviour. In the third step, age was

examined as a moderator (i.e., Searching \times Age, Directing \times Age). The interaction terms were entered as residualised variables to remove the variance shared with the main effects and to avoid multicollinearity (Aiken & West, 1991).

Regression results are reported in Table 3. For positive affect, control variables entered in the first step of the model together accounted for 34% of the variance, $R^2 = .34$, $F(5, 167) = 16.87$, $p < .001$. Adding searching for meaning and directing behaviour in the second step of the regression explained only 1% of additional variance, $R^2 = .35$, $F(2, 165) = 1.59$, $p > .05$. Age, however, acted as a significant moderator of the relation between meaning making and positive affect (3% of variance explained), $R^2 = .38$, $F(2, 163) = 4.24$, $p < .05$, but only searching for meaning was a significant predictor. The interaction is depicted in Figure 1. Partial correlations (controlling for education, health, general thinking and talking about the past) show that whereas there is no relation between searching for meaning and positive affect in young adults, $r_p(83) = -.10$, $p > .05$, searching for meaning is related to positive affect for older adults, $r_p(78) = .35$, $p < .01$. The more that older adults search for meaning in the past the greater their reported positive affect.

For negative affect, control variables in the first step of the model accounted for 9% of the variance, $R^2 = .09$, $F(5, 167) = 3.25$, $p < .01$. Together, the meaning making variables (i.e., searching for

⁵ Age was entered as a categorical variable to be consistent with the MANCOVAs in both Study 1 and Study 2.

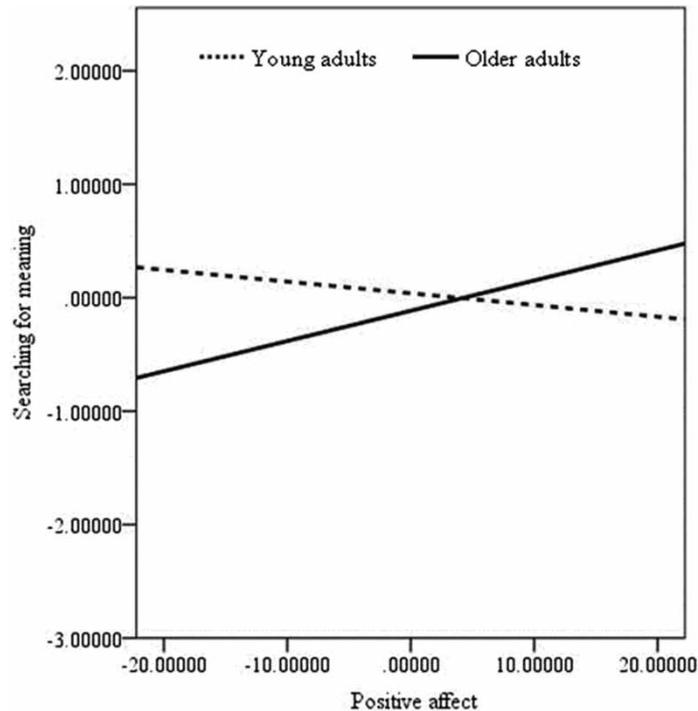


Figure 1. Age as a moderator of the relation between searching for meaning and positive affect. Partial correlations are reported and thus residualised terms are used for the figures; covariates include: education, subjective health, and general thinking and talking about the past. Young $r_p(83) = -.10, p > .05$; old $r_p(78) = .35, p < .01$.

meaning, directing behaviour) explained only an additional 2% of the variance, $R^2 = .11$, $F(2, 165) = 1.80, p > .05$. Age did not act as a moderator of meaning making in predicting negative affect, $R^2 = .13$, $F(2, 163) = 1.96, p > .05$. Thus, the two types of meaning making, when measured as overall frequency of making meaning, did not show a negative relation with SWB.

For future time perspective, the control variables entered in the first step explained 42% of the variance, $R^2 = .42$, $F(5, 167) = 24.47, p < .001$. The two meaning-making variables explained an additional 5% of the variance in future time perspective, $R^2 = .47$, $F(2, 165) = 6.97, p = .001$. As seen in Table 3, only searching for meaning was a predictor. The more that individuals use autobiographical memory to search for meaning, the more optimistic and open-ended their view of the future. This effect was, however, moderated by age. Searching for Meaning \times Age and directing behaviour \times Age interaction terms were both significant, and together explained an additional 3% of the variance, $R^2 = .50$, $F(2, 163) = 5.83, p < .01$. Partial correlations (controlling for education, health, general thinking and talking about the past) were used to deconstruct interactions. As can be seen in Figure 2, there was no relation between

searching for meaning and positive, open-ended future time perspective for younger adults, $r_p(83) = .13, p > .05$, but the more that older adults searched for meaning in the past, the more they saw their future as positive and open ended, $r_p(78) = .37, p = .001$. The pattern was similar for directing behaviour. Although it does not seem apparent from Figure 3, age was a moderator, even though the relation between using the past to direct behaviour and future time perspective was positive for both young and older adults, the magnitude of the relations differed. Using the past to direct behaviour was not significantly related to positive, open-ended future time perspective for younger adults, $r_p(83) = .11, p > .05$, but was significantly related for older adults, $r_p(78) = .24, p < .05$. Thus, older American adults who use the past to search for meaning had a more positive open-ended view of the future.

Discussion

Age differences in two components of meaning making, searching for meaning and directing behaviour, were examined, and age was explored as a moderator of the relation between meaning

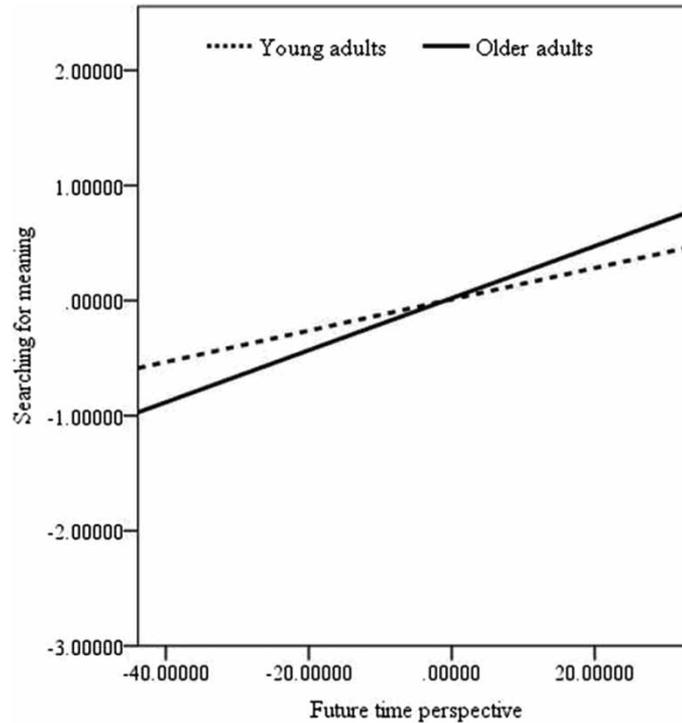


Figure 2. Age as a moderator between searching for meaning and future time perspective. Partial correlations are reported and thus residualised terms are used for the figures; covariates include: education, subjective health, and general thinking and talking about the past. Young $r_p(83) = .13, p > .05$; old $r_p(78) = .37, p < .01$.

making and SWB. As expected (Bluck & Alea, 2009; Webster, 1995), younger people more often use autobiographical memory to direct future behaviour. This may reflect their focus on future goals (Ebner et al., 2006) and accomplishment of developmental tasks, most of which lie ahead (Baltes, 1987). However, inconsistent with study expectations that older adults would more frequently search for meaning, there were no age group differences. Past research finds that, when autobiographical narratives of specific events are content coded, older adults are more likely to show that they have found meaning (Singer et al., 2007) or report lessons learned (Pratt et al., 1999). Perhaps the difference in previous research and the results reported reflect different methodologies: We assessed searching for meaning as the general tendency to use the past as a way to find meaning in life. The measure was not attached to a specific life event. Other work using self-report measures also finds that older adults search for meaning in life to a lesser extent than other age groups (Steger et al., 2009). Older adults may be more likely to find meaning or derive life lessons (Bluck & Glück, 2004) at the level of narrative processing of individual events, but that in terms

of the general search for meaning, individuals of all ages are just as actively engaged in trying to make life meaningful by reflecting on their past.

With these age results in mind, the second aim of the study was to examine whether meaning making was beneficial (or not) to SWB, but particularly whether age was a moderator of this relation. At first it appeared that neither type of meaning making was beneficial for or detrimental to current affect (i.e., no relations with positive or negative affect), but that searching for meaning was related to future-oriented SWB. However, examining age as a moderator clarified results. Relations with SWB were more likely in older adults. In fact, searching for meaning was related to greater levels of current positive affect as well as to more optimistic, open views of the future only for older adults. The same pattern was found for using the past to direct behaviour: It predicts future orientation, only for older adults. Younger adults showed no relations between meaning making and SWB. Taken together with the initial age group findings, it seems that even though older adults engage in meaning making to the same extent as or less than younger adults, when they do, they are more likely to reap the benefits.

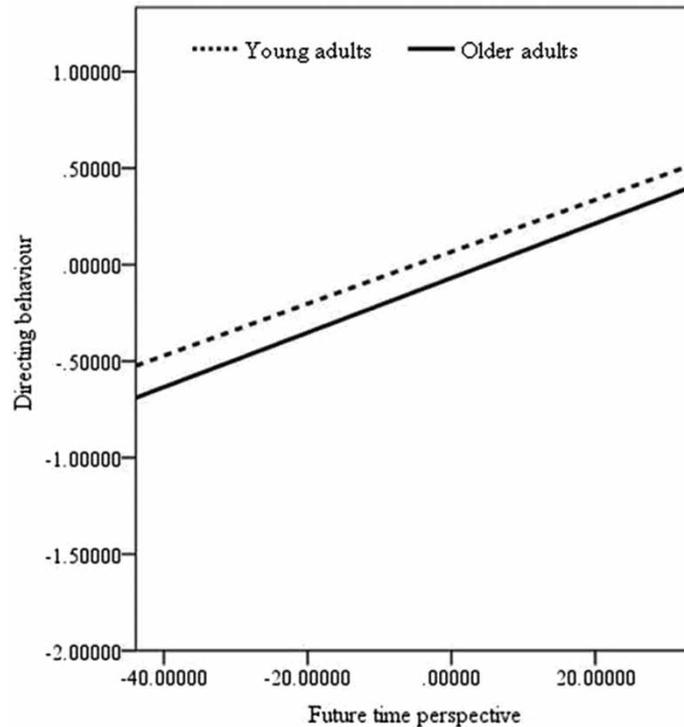


Figure 3. Age as a moderator of the relation between making meaning by directing behaviour and future time perspective. Partial correlations are reported and thus residualised terms are used for the figures; covariates include: education, subjective health, and general thinking and talking about the past. Young $r_p(83) = .11, p > .05$; old $r_p(78) = .24, p < .05$.

Thus, part of the confusion in past research examining the costs and benefits of making meaning of life's events may be due to the lack of serious consideration of lifespan context. Culture is another context that shapes the way people remember life events (Nelson, 1993), and is addressed in Study 2.

STUDY 2

How people make meaning of life events cannot be detached from the sociocultural context in which they live (McAdams & Pals, 2006; Nelson, 1993; Singer, 2004; Wang & Conway, 2004). Using one's personal past for meaning making has been shown to vary across cultures. Swiss students (Lardi, D'Argembeau, Chanal, Ghisletta, & Van der Linden, 2010) use integration to search for meaning in self-defining memories more than North Americans (Singer et al., 2007). The autobiographical narratives of Chinese middle-aged adults contain more reflective comments indicative of searching for meaning than do European Americans (Wang & Conway, 2004). Use of the past to direct behaviour also reveals

cultural differences. European-American students' memories are more likely to contain directives compared to Chinese students' memories (Kulkofsky, Wang, & Hou, 2010). American adults (Bluck & Alea, 2011; Bluck, Alea, Habermas, & Rubin, 2005) self-report using the past as a directive more than for other functions, but Danish young adults report using this memory function least (Rasmussen & Bernsten, 2009).

No previous research on using the past to make meaning, however, has been done in a developing country, particularly with an older adult sample. Thus, the goal of Study 2 was to explore whether the age group differences and moderating effects of age found in Study 1, with an American sample, would also be found in a developing country, Trinidad and Tobago. Although speculative, we thought that perhaps the challenges associated with Trinidad and Tobago's (TT) developing nation status (e.g., life conditions that result in a lower life expectancy; World Health Statistics, 2011) might increase the need to make meaning of life events due to environmental pressure (Bluck et al., 2010), and increase the extent to which meaning making predicts SWB. That is, that both searching for meaning

and directing behaviour were expected to predict SWB for Trinidadians. It was also plausible that historical circumstances in this culture might lead to different age results than that observed in the US. Trinidad and Tobago was a British colony until 1962. Caribbean scholars argue that colonialisation forces the abandonment of one's self (e.g., Best, 2001; Brathwaite, 2005), thus perhaps also increasing the need to make meaning of one's life. This need may be stronger for Trinidadian older adults whose personal lives intersected with major historical events (Brown, 1990): They grew up under British rule but lived through the transition to independence. In sum, given the history of the country, meaning making via both searching for meaning and directing behaviour is expected to be more frequent in older Trinidadians. However, given the developing status of the country, both age groups are expected to show positive relations to SWB from making meaning of life's events. Different measures of SWB were employed in Study 2, focusing on multiple, interrelated aspects of psychological well-being (Ryff, 1989).

Methods

Participants

There were 167 participants (9% male; 91% female) from the Eastern and Central areas of Trinidad.⁶ The ethnic distribution was similar to the population (National Census Report, Trinidad and Tobago, 2000): 43% African, 34% East Indian, 21% Mixed, 1% Caucasian and 1% reported as "Other". Young adults ($n=108$) ranged from 18 to 30 years ($M=22.52$, $SD=3.33$), and older adults ($n=59$) ranged from 50 to 74 ($M=60.61$, $SD=6.67$). In Trinidad, there were no age differences in education (young adults $M=16.15$, $SD=3.05$; older adults $M=16.00$, $SD=7.32$), $t(160)=0.21$, $p>.05$, but a small, significant difference in subjective health (young adults $M=4.70$, $SD=0.90$; older adults $M=4.98$, $SD=0.77$), $t(165)=2.01$, $p=.05$. Younger adults were recruited from a university course and received credit towards a research requirement. Older adults were recruited from

community organisations and received an equivalent of approximately US\$15 as compensation.

A few additional demographics are presented here so as to provide a fuller picture of Trinidad and Tobago, which is an emerging economy (International Monetary Fund, World Economic Outlook, 2010), with lower education ratings (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2010), markers of subjective health (World Health Statistics, 2011), and life expectancy than the US (i.e., Trinidad life expectancy is approximately 70, US life expectancy is approximately 79; World Health Statistics, 2011). Consistent with those designations, note that the US sample in Study 1 was more educated than the Trinidadian sample, $t(334)=4.28$, $p<.001$. Americans also reported greater subjective health than Trinidadians, $t(339)=3.95$, $p<.005$. Descriptive statistics for education and health are reported in the respective participant sections.

Procedure and measures

The procedure for the Trinidadian sample was virtually identical to the one used for the American data collection. The background and control measures were also the same and included: gender, education, subjective health, as well as the two general items about thinking and talking about the past from the TALE (Bluck & Alea, 2011). The meaning-making measures assessing both searching for meaning and directing behaviour was also given to Trinidadians. The ordering of the items was the same as in the American sample.

Meaning making: Factorial equivalence across Trinidadian age groups, and the two cultures

As in Study 1, both searching for meaning and directing behaviour were self-reported (see description of measures in Study 1). Multiple group confirmatory factor analyses (CFA) was conducted to examine whether the meaning-making measures would be invariant across age groups in the Trinidadian sample, but also across the American and Trinidadian samples, demonstrating cultural invariance. The same criteria for the CFA described in Study 1 were used. Models were compared: an unconstrained model and a constrained model where the factor loadings across the two Trinidadian age groups, and the

⁶ There were not enough men in the Trinidadian sample to run meaningful gender analyses. Even so, when study analyses were run only for women, results are identical to those reported. Thus, gender is not considered further.

two cultures were made invariant (Kline, 1998). The models showing Trinidadian age invariance and cultural invariance are provided in the middle and bottom portion of Table 1, respectively. Fit statistics for age invariance in the Trinidadian sample were mostly acceptable but likely influenced by the smaller sample size of the older Trinidadian adults ($n=59$; Kline, 1998; Loehlin, 2004; Schumacker & Lomax, 2004). In any case, the unconstrained and the constrained models were not significantly different implying age invariance in the Trinidadian sample, like the American sample. The standardised regression weights were well-within acceptable ranges. For the younger Trinidadians weights were (in order of measure description in Study 1): searching for meaning = .54, .57, .63, .79, .74, .67; directing behaviour = .45, .69, .69, .57, .78. Older Trinidadian's regression weights were: searching for meaning = .59, .73, .75, .76, .79, .69; directing behaviour = .51, .74, .64, .64, .72.

Cultural invariance was also demonstrated. The goodness of fit indices comparing the unconstrained model and the model comparing the American to Trinidadian samples are shown in the bottom portion of Table 1, indicating that the models were acceptable, and that there were no differences between the two models. Standardised regression weights were in acceptable ranges. The weights for the searching for meaning factor for Americans = .56, .62, .69, .70, .67, .67, .70, and were .60, .71, .62, .63, .47 for the directing behaviour factor; Trinidadians' weights for the searching for meaning factor = .58, .63, .70, .76, .74, .69, and for the directing behaviour factor = .55, .74, .59, .66, .67. Thus, again, the two-factor, searching for meaning and directing behaviour measure of meaning making is confirmed. The model is also invariant across the two cultures. The Chi-square different test (see Table 1) was non-significant. The two measures of meaning making were also internally reliable in the Trinidadian sample: Cronbach's $\alpha = .83$ for searching for meaning, and .75 for directing behaviour.

SWB: Psychological well-being

Three 14-item subscales of Ryff's Psychological Well-being Scales (Ryff, 1989) were used to assess SWB in Trinidadians: self-acceptance, positive relations with others and purpose in life. Self-acceptance refers to positive attitudes towards the self (e.g., "In general, I feel confident and positive

about myself."). Positive relations with others assesses feelings of warm, trusting relationships (e.g., "I enjoy personal and mutual conversations with family members and friends."). The purpose in life subscale assesses belief that life has a goal (e.g., "I have a sense of direction and purpose in life."). Participants respond using Likert-type scales ranging from "strongly disagree" (1) to "strongly agree" (6). Cronbach's α were: self-acceptance = .82; positive relations with others = .85; purpose in life = .88. The three subscales were moderately correlated in the current study (see Table 2).

Results

Preliminary analyses

Preliminary correlational analyses were again conducted to determine appropriate control variables. The variables considered for inclusion as controls in major analyses were the same as those from Study 1, education, subjective health, and general thinking and talking about the past. Correlations with age, meaning making and SWB are presented in the bottom portion of Table 2. Frequency of thinking and talking about the past was related to meaning making, and talking about the past was related to SWB (i.e., positive relations with others). Education was related to SWB: Being more educated was related to higher levels of SWB (i.e., purpose in life). The same was true of subjective health: It was positively related to purpose in life. Thus, education, subjective health, and general thinking and talking about the past were used as controls in all analyses. This was the same as Study 1.

Age group differences in searching for meaning and directing behaviour

A one-way multivariate analysis of covariance (MANCOVA) was conducted to examine if there were age group differences in meaning making for Trinidadians. Covariates were education, subjective health and overall frequency of thinking about and of talking about the past. The dependent variables were searching for meaning and directing behaviour. The age group multivariate effect was significant, Wilk's $\lambda = .95$, $F(2, 155) = 4.30$, $p < .05$. Both univariate effects were significant. Younger Trinidadians ($M = 3.37$, $SD = 0.84$) were more likely to search for

TABLE 4

Summary of hierarchical regressions examining whether meaning-making predicts psychological well-being (Trinidadian sample)

Predictors	R^2	B	SEB	β	t
Step 1: Control variables	.23***				
Step 2: Meaning making	.29**				
Searching		-0.09	0.06	-.11	-1.38
Directing behaviour		0.30	0.10	.23	3.16**
Step 3: Age as moderator	.29				
Searching \times Age		0.03	0.23	.02	0.88
Directing behaviour \times Age		-0.09	0.28	-.22	0.75

Coefficients for control variables have been omitted (see Table 2 for the pattern of relations between control variables and SWB). Including additional variables in the model at each step does not change results from previous step. ** $p \leq .01$, *** $p \leq .001$.

meaning in the past compared to older adults in Trinidad ($M = 3.10$, $SD = 0.79$), $F(1,156) = 4.37$, $MS = 2.56$, $p < .05$, $\eta^2 = .02$. The pattern was the same for directing behaviour, $F(1, 156) = 8.55$, $MS = 3.54$, $p < .01$, $\eta^2 = .04$. Young adults ($M = 3.71$, $SD = 0.74$) were more likely than older adults ($M = 3.39$, $SD = 0.65$) to make meaning of the past by using it to direct current and future thoughts and behaviour.

Meaning making as a predictor of subjective well-being: Age as a moderator

Recall that SWB was assessed using three psychological well-being subscales (self-acceptance, positive relations with others, purpose in life). However, given the moderately high correlations between the three subscales (see Table 2), and that in preliminary analyses the same pattern of results reported below held for each subscale separately, we collapsed across the subscales. As such, there is one SWB measure for Trinidadians. Results are reported in Table 4. Control variables (education, subjective health, overall frequency of thinking about and talking about one's past, and the age main effect) accounted for 23% of the variance in the first step of the regression, $R^2 = .23$, $F(5, 156) = 9.41$, $p < .001$. Searching for meaning and directing behaviour together explained an additional 6% of variance in SWB, $R^2 = .29$, $F(2, 154) = 6.72$, $p < .01$. Directing behaviour, and not searching for meaning, however, is the only significant predictor. The more that people use the past to direct their current thoughts and behaviour, the greater their SWB. Age as a moderator (i.e., Searching \times Age, and Directing behaviour \times Age interactions) did not increase the variance explained, $R^2 = .29$, $F(2, 152) = 0.07$, $p > .05$.

In summary, Trinidadian younger adults, compared to older adults, are more likely to search for meaning in the past and to use the past to directive behaviour. This was contrary to expectations: Older Trinidadians were expected to engage in meaning making more often than younger Trinidadians due to historical circumstance. It seems that, regardless of culture, younger adults may frequently use the past to direct the present in line with their future-oriented developmental tasks (see also, e.g., Bluck & Alea, 2009; Webster, 1995; Webster & McCall, 1999). Further, using one's past to direct behaviour predicts SWB for Trinidadians. Unlike in the American sample, this was true for both older and younger adults.

GENERAL DISCUSSION

This Special Issue is concerned with understanding mixed results in the literature on the relation of meaning making to psychological benefits and distress. Singer (2004) has called for researchers to provide greater contextualisation of meaning making. In the current research studies, we attempted to meet this mandate: The relation of meaning making to SWB was considered in developmental life phase and cultural contexts. We also investigated two types of meaning making: searching for meaning and using one's past to direct behaviour (Bluck & Alea, 2011). Although searching for meaning and directing behaviour both rely on using autobiographical memory to make meaning within one's continually evolving life story (McAdams, 2001; Olivares, 2010) and are thus overlapping aspects of meaning making, parsing meaning making in to these two components revealed different specific patterns of relations

with SWB.⁷ Differences emerged in the frequency with which younger and older adults in two different cultures report making meaning of past events. The two components of meaning making were differentially related to SWB, and age acted as a moderator in the American context, but not for Trinidadians.

Contextualising meaning making to examine benefits and costs

The studies reported here contextualised meaning making by considering age group differences within an American and Trinidadian context. Trinidadian results suggest that consideration of the context in which people remember may be a fruitful way forward in detangling the mixed findings on whether meaning making facilitates or detracts from SWB. The pattern of findings suggest that it may be necessary to account for the different ways that people of various ages can make the past meaningful: by searching for meaning from life's events or using their past to direct current and future thoughts and behaviours. Of most relevance to the focus of this Special Issue, however, is whether age group patterns for meaning making translate into differential relations with SWB in the two cultures. Our interpretations concerning differences in results by culture are purely speculative, partly due to the fact that different measures of SWB were used in the two studies.

Only a small body of research has assessed whether using one's past to make meaning is a source of SWB in different adult life phases (e.g., Alea et al., 2010; Bauer et al., 2005; Pals, 2006). A consistent finding in our research with Americans was that older adults who report more frequently using autobiographical memory to search for meaning, that is, to seek explanations for life's events, reported both greater levels of emotional well-being (i.e., positive affect such excitement, enthusiasm) and having a more open, optimistic view of the future ("My future is full of possibilities"). These findings suggest that, for older Americans, the search for meaning has positive present outcomes but is also related to a more

positive view of the future. That is, these relations are evident not only for current SWB, but in the individual's *extended self* (extended over time; Neisser, 1988). Looking back at one's life to find meaning is related to having a more expansive, optimistic view of what the future might hold. This fits nicely with the notion that individuals search for meaning in the context of constructing and reconstructing (Freeman, 2010) their life story: a story in which they evaluate and make sense of the past but that also helps them to map out or envision a positive future (Newby-Clark & Ross, 2004). Through re-examining life events and searching for meaning, the older person is able to cast even difficult events in a more positive light (Bluck & Glück, 2004). Recent research has also shown that how people remember the past is linked to how they envision the future, in terms of both the specificity of memories and imagined futures (e.g., Wang, Hou, Tang, & Wiprovnick, 2011) and neural substrates representing past and future events (Addis, Wong, & Schacter, 2007). The past is thus recruited to make sense of the future, and, when the past is made meaningful, the future feels full of possibilities.

Although searching for meaning in life events may be adaptive across cultures, McAdams (2006) provides a convincing argument that Americans are particularly likely to make meaning of their lives in a way that allows redemption. Redemption occurs when a difficult past is narrated as one that has turned into a positive, generative, future. He argues that American culture is imbued with values encouraging people to see themselves as champions of the individual self, and to believe that everyone can, and maybe should, freely reinvent themselves positively in the face of challenge. That older Americans may come to view the future more optimistically as they actively search for meaning in the past, fits well with this larger story of American values. In late life, individuals are at a point in the lifespan when the developmental task is to create integrity (Erikson, 1968), while normatively engaging in maintaining physical and cognitive functioning (Baltes, 1987), and envisioning potential losses in SWB (Staudinger, Bluck, & Herzberg, 2003). Young adults may not have enough life lived, or a sufficiently constructed life story (Habermas & Bluck, 2000) to actively draw meaning (Pasupathi, Staudinger, & Baltes, 2001) that will enhance their SWB.

In contrast to the US, using autobiographical memory to actively search for meaning was not

⁷The searching for meaning variable also contains the variance shared with using the past to direct behaviour. However, the directing behaviour variable represents the unique effects of using the past to guide and direct behaviour and decisions (see Results section for details).

related to SWB in Trinidadians. Instead, using autobiographical memory to direct behaviour (e.g., remembering past lessons and mistakes to direct one's behaviour) was associated with SWB, measured with three subscales of Ryff's (1989) psychological well-being scale. Examining age as a moderator revealed that the relation between making the past meaningful by using it to direct behaviour and SWB held across age groups. For both younger and older Trinidadian adults, more frequently using memory to direct behaviour predicted SWB in terms of more positive views about oneself (i.e., self-acceptance), perceptions of one's relationships with family and friends as more warm and trusting (i.e., positive relations), and a more optimistic sense of one's purpose in their life (i.e., purpose in life). Though both types of meaning making studied here involve autobiographical recall and reasoning through which past events are reconstructed and reframed (Conway, Singer, & Tagini, 2004), directing behaviour denotes reliance on lessons learned through one's own successes, through "wise words" of others, or through past mistakes. As such it refers to remembering things one has learned and reapplying them as useful tools in novel circumstances. In contrast, searching for meaning involves finding or constructing a new and deeper understanding of the past. Given the many daily challenges faced in Trinidadian life (World Health Statistics, 2011; UNESCO, 2010), it seems reasonable that meaning making that results in specific directives for mastering current challenges effectively would lead to a greater sense of SWB. It may be only after challenges of daily living are mastered (e.g., physiological and safety needs; Maslow, 1943) that the less instrumental, potentially culture-specific, active search for meaning in the past results in greater SWB (i.e., as occurs in the US sample). Note that the relation between directing behaviour and SWB held for both young and older adults, even though younger adult Trinidadians were more likely to use the past to direct behaviour. It thus, seems that even though older Trinidadians use the past to direct their future to a lesser extent than younger adults, when they do the benefits to SWB are apparent.

In sum, in the current studies, we found no evidence that meaning making was detrimental to SWB, but instead found that the benefits of meaning making differ depending on the component of meaning, the aspect of SWB investigated, and the life phase and cultural context of individuals. While the consistent finding in the US is

that searching for meaning is beneficial for SWB (i.e., positive affect, optimistic future-orientation), it is directing behaviour that is positively related to SWB (i.e., multidimensional psychological well-being) in Trinidad and Tobago. Age moderates the relation of meaning making to SWB for Americans, but in an emerging nation like Trinidad and Tobago, meaning making leads to SWB for both the young and the old.

Limitations

Note that the correlational design of the studies does not allow causal claims about whether frequency of meaning making leads to SWB, or whether the reverse is true. Perhaps having greater SWB provides people with a secure base from which they feel comfortable in exploring their past to search for meaning. The cross-sectional design of the studies is also a limitation, as age group findings may reflect cohort differences. Finally, although Study 1 and Study 2 were similar in many ways and the meaning-making measure was both age and culture invariant, SWB was assessed differently in the two cultures. Thus, while noting the differential patterns across cultures, we were unable to make direct comparisons of how meaning making affected specific SWB outcomes. SWB is a multidimensional construct within which dimensions (such as those assessed across the two studies) are often correlated (Pavot & Diener, 2004). Still, using a full battery of the same SWB measures, and doing so across a wider group of cultures, seems an excellent next step in this line of research. Such future research might also combine the general tendency to make meaning using self-reports (assessed in the current studies) with content analysis of meaning in autobiographical narratives of specific events.

CONCLUSION

The current research helps to elucidate when and how meaning making is related to adaptive psychological outcomes. Individuals' general tendency to use autobiographical memory for meaning making appears to be positively (and not negatively) related to SWB, but the exact nature of such relations varies by the component of meaning assessed, as well as by individuals' life phase and their cultural context. As such, the current findings empirically support the call for

greater contextualisation of meaning making (Singer, 2004; Singer et al., 2007). Parameters for a conceptual model delineating links between meaning making and SWB might include multiple components (e.g., searching for meaning, as well as directing behaviour) and levels of meaning making (self-reported frequency, content-coded narrative meaning) to predict relations with specific aspects of multidimensional SWB, and should include the moderating role of contextual factors such as one's culture and one's place in the lifespan (i.e., sampling multiple age groups). Including developing nations (e.g., Iwasaki, 2008), and guaranteeing that age investigations probe meaning well into later life, seem necessary for fully understanding the role of meaning making in enhancing lives over time.

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