

Finding Joy in the Past, Present, and Future: The Relationship Between Type A Behavior and Savoring Beliefs Among College Undergraduates

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Prior research investigating savoring behaviors and Type A behavior (TAB) found that extreme Type A undergraduates are most likely to score in the highest quintile on self-congratulation, and in the lowest three quintiles on memory-building. This study used scores on past-, present-, and future-focused savoring beliefs to discriminate 117 extreme Type A versus 131 extreme Type B college undergraduates. Univariate statistical analysis conducted via UniODA revealed that compared to extreme Type Bs, extreme Type As had significantly greater reminiscence (past focus) and anticipation (future focus) scores, and also had marginally greater savor the moment (present focus) scores. Multivariate analysis via CTA identified a single-attribute model involving a three-branch parse: extreme Type Bs are substantially *more likely* than extreme Type As to score at *lowest levels* on anticipation; extreme As and Bs are *comparably likely* to score at *moderate levels* on anticipation; and extreme Type As are modestly *more likely* than extreme Type Bs to score at the *highest levels* on anticipation.

Much work has investigated the consequences TAB, characterized by a strong achievement orientation, hard-driving competitiveness, speed-impatience, and hostility in response to threat to personal control over salient outcomes, in relation to Type B behavior, characterized by a relaxed, easy-going orientation and lower levels of competitiveness, impatience, and hostility.^{1,2} Exploring differences in the charac-

teristic styles though which Type As and Bs savor positive outcomes, research has shown that Type As are less likely than Type Bs to look back on positive events afterwards in order to store memories for later recall—a past-focused savoring response that might undermine the ability to savor positive outcomes retrospectively.³ More recent research has, on the one hand, identified cognitive and behavioral

response among Type As that dampen Type As' enjoyment of ongoing positive events—in particular, less counting of blessings, less memory building, and more “kill joy” fault-finding.^{4,5} On the other hand, research has also found that Type As, relative to Type Bs, report higher levels of self-congratulation (i.e., telling oneself how proud one is and how impressed others are) in response to achievement-related outcomes—a present-focused savoring strategy that amplifies enjoyment.⁵ Concerning future-focused savoring, one might expect Type As' greater achievement orientation, relative to Type Bs, to be associated with a greater capacity to derive pleasure though the anticipation of goal attainment.

Accordingly, the present study compared Type As' and Bs' generalized beliefs about their capacity to enjoy positive outcomes through reminiscence, savoring the moment, and anticipation. We tested the *a priori* hypotheses that, compared to Type Bs, Type As perceive themselves as being less able to savor through reminiscence due to their reluctance look back to store memories, and more able to savor through anticipation due to their greater goal orientation. An exploratory analysis addresses differences between As and Bs on savoring the moment, because there is no compelling reason to hypothesize that As and Bs will differ in any systematic manner on this measure.

Methods

The sample was drawn from a large pool of college undergraduates who completed a battery of questionnaires.⁵ TAB was assessed using the short form of the Jenkins Activity Survey for Students.⁶⁻¹¹ In order to maximize the reliability of assignments into A/B categories, normative guidelines were followed to obtain an analysis sample consisting of 131 extreme Type B and 117 extreme Type A college undergraduates.¹²⁻¹⁵ Savoring belief subscales were assessed using the Savoring Beliefs Inventory (SBI).¹⁶ The 24-item SBI provides separate

subscales assessing perceived capacity to savor positive outcomes through reminiscing, enjoying the moment, and anticipating, and scores on the SBI have been shown to have good internal consistency and test-retest reliability, as well as strong convergent, discriminant, and predictive validity, among both younger and older adults.^{16,17}

Results

Table 1 presents descriptive statistics for the three savoring belief subscales separately by A/B Type. For expository purposes, and to provide data for future meta-analysis, means on the three subscales were compared between A/B Types using Student's *t*-test. No statistically reliable effect emerged for scores on reminiscence [$t(244)=1.2, p<0.25$], savor the moment [$t(246)=0.7, p<0.49$], or anticipation [$t(246)=1.2, p<0.23$] subscales.

Table 1: Descriptive Statistics for Savoring Belief Subscales, by A/B Type

Savoring Belief Subscale	A/B Type	Mean	SD	Median
Reminiscence (Past Focus)	B	5.8	0.80	5.8
	A	5.9	0.89	6.1
Savor the Moment (Present Focus)	B	5.4	0.93	5.5
	A	5.5	1.10	5.6
Anticipation (Future Focus)	B	5.3	0.90	5.4
	A	5.5	1.09	5.8

Note: $N_{\text{Type A}}=117$, $N_{\text{Type B}}=131$ (there was one missing value for each A/B Type on Reminiscence). SD=standard deviation.

Univariate Analyses. UniODA statistical analysis¹⁸⁻²⁰ was performed using MegaODA software²¹⁻²³ to investigate the independent associations between savoring belief subscales and A/B Type. For reminiscence a statistically reliable, ecologically weak effect emerged

($p < 0.04$, ESS=16.6), which was stable in jackknife validity analysis ($p < 0.007$).¹⁸ The UniODA model was: if reminiscence ≤ 5.93 (53rd percentile in the sample), then predict Type B; otherwise predict Type A. This model reveals that Type As had significantly higher reminiscence scores than Type Bs. The model correctly classified 56% of the Type Bs, and 61% of the Type As. The model was correct 62% of the time a prediction of Type B was made, and 55% of the time a prediction of Type A was made.

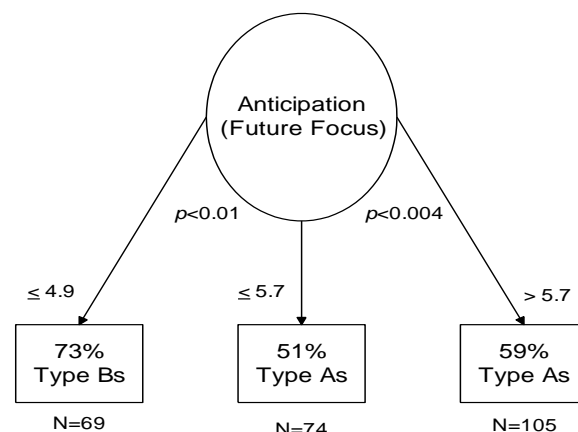
For savor the moment a statistically marginal, ecologically weak effect emerged ($p < 0.08$, ESS=14.7), which was stable in jackknife validity analysis ($p < 0.005$). The UniODA model was: if savor the moment ≤ 6.19 (77th percentile in the sample), then predict Type B; otherwise predict Type A. This model reveals that the Type As had marginally higher savor the moment scores compared to the Type Bs. The model correctly classified 84% of the Type Bs, and 31% of the Type As. The model was correct 58% of the time that a prediction of Type B was made, and 63% of the time that a prediction of Type A was made.

Finally, for anticipation a statistically reliable, ecologically weak effect emerged ($p < 0.003$, ESS=20.2), which was stable in jackknife validity analysis ($p < 0.002$). The UniODA model was: if anticipation ≤ 5.69 (58th percentile in the sample), then predict Type B; otherwise predict Type A. This model reveals that the Type As had significantly higher anticipation scores compared to the Type Bs. The model correctly classified 67% of the Type Bs, and 53% of the Type As. The model was correct 62% of the time that a prediction of Type B was made, and 59% of the time that a prediction of Type A was made.

Multivariate Analysis. Figure 1 illustrates the enumerated hierarchically optimal classification tree analysis (CTA) model^{24,25} obtained using automated software²⁶ to discriminate A/B Type treating the reminiscence,

savor the moment, and the anticipation subscale scores, as well as gender, as potential attributes.

Figure 1: CTA Model Discriminating A/B Type Using Three Savoring Belief Dimensions



As seen, only the anticipation subscale emerged as a statistically significant attribute in the model, for which a three-endpoint parse was identified.¹⁸ In the CTA model, extreme Type B undergraduates are substantially *more likely* (3:1 odds) than extreme Type As to score at *lowest levels* on the anticipation dimension of savoring beliefs: the cut-point 4.9 represents the 28nd percentile on this dimension for the sample. And, while A/B Types are *comparably likely* to score at *intermediate levels* on anticipation (1:1 odds), Type As are modestly *more likely* (3:2 odds) to score at *highest levels* on anticipation: the cut-point 5.7 represents the 58th percentile on this dimension for the sample.

Taken in sum the CTA model reveals Type Bs are substantially more likely to score in the lowest 30% of the scores on anticipation, while Type As are modestly more likely to score in the highest 60% of the scores. The ESS of 24.1 achieved by the model was at the boundary between relatively weak versus moderate effect strength.¹⁸ The model correctly classified 41% of Type As, and 83% of Type Bs in the sample. The model was correct 73% of the time it pre-

dicted an observation was Type B, and 56% of the time it predicted an observation was Type A.

Discussion

Results reveal an interesting pattern of differences between Type As and Type Bs in terms of their perceived ability to savor positive experiences retrospectively, concurrently, and prospectively. Concerning past-focused savoring, Type As reported a *greater* capacity than Type Bs to derive enjoyment by reminiscing about positive memories, contrary to the *a priori* hypothesis. Concerning present-focused savoring, there was only a marginally significant A-B difference in the perceived capacity to savor the moment. Concerning future-focused savoring, the univariate analysis revealed that Type As perceived higher capacity to derive enjoyment through anticipation relative to Type Bs, and the multivariate analysis revealed specific thresholds of anticipation subscale scores that reliably discriminated As and Bs. In particular, significantly more Type Bs and fewer Type As scored below the 28th percentile on anticipation, and significantly more Type As and fewer Type Bs score above the 58th percentile on anticipation; whereas As and Bs were equally likely to fall between the 28th and 58th percentile on anticipation. Thus, while the univariate analysis is consistent with the *a priori* hypothesis, the multivariate analysis provides strong evidence to support the *a priori* hypothesis. In sum, Type As, relative to Type Bs, believe they are more capable of enjoying positive memories through reminiscence and marginally more capable of enjoying positive moments; and are less likely to report a lower capacity (< 28th percentile) and more likely to report a higher capacity (> 58th percentile) to derive joy through anticipation.

The difference between the results of the univariate and multivariate analyses of anticipation for As and Bs highlights the potential benefit of considering nonlinear effects

in testing research hypotheses. The UniODA (univariate ODA) model reflects the cut-score on anticipation that produces the highest possible accuracy in classifying As and Bs when selecting a single cut-point to predict TAB on the basis of anticipation. The multivariate CTA model, in contrast, represents the combination of Reminiscence, Savoring the Moment, and Anticipation subscale scores that produces the highest possible accuracy in classifying As and Bs. The three-endpoint parse that emerged in the CTA model reveals that the hypothesized A-B difference in the capacity to anticipate exists at the lower and upper range of the Anticipation subscale, but not in the middle range of the subscale. Whereas more Bs than As fall in the lower range and more As than Bs fall in the upper range, As and Bs are equally distributed in the mid-range of the subscale. Thus, the multivariate CTA model not only confirms the *a priori* hypothesis, but also pinpoints the specific levels of anticipation at which the predicted A-B differences emerge. Clearly, researchers would be wise to examine the possibility of nonlinear effects in testing bivariate relationships, in order to avoid missing important and informative research conclusions. CTA¹⁸ is the only statistical methodology available which is capable of identifying *explicitly optimal*²⁷ parsed models such as the model which was obtained presently.

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