

A peer-reviewed version of this preprint was published in PeerJ on 22 March 2016.

[View the peer-reviewed version](https://doi.org/10.7717/peerj.1826) (peerj.com/articles/1826), which is the preferred citable publication unless you specifically need to cite this preprint.

Garcia D, Sailer U, Nima AA, Archer T. 2016. Questions of time and affect: a person's affectivity profile, time perspective, and well-being. PeerJ 4:e1826 <https://doi.org/10.7717/peerj.1826>

Questions of Time and Affect: A person's affectivity profile, time perspective, and well-being

Danilo Garcia, Uta Sailer, Ali Al Nima, Trevor Archer

Background: A “balanced” time perspective has been suggested to have a positive influence on well-being: a sentimental and positive view of the past (high Past Positive), a less pessimistic attitude toward the past (low Past Negative), the desire of experiencing pleasure with slight concern for future consequences (high Present Hedonistic), a less fatalistic and hopeless view of the future (low Present Fatalistic), and the ability to find reward in achieving specific long-term goals (high Future). We used the affective profiles model (i.e., combinations of individuals’ experience of high/low positive/negative affectivity) to investigate differences between individuals in time perspective dimensions and to investigate if the influence of time perspective dimensions on well-being was moderated by the individual’s type of profile. **Method:** Participants ($N = 720$) answered to the Positive Affect Negative Affect Schedule, the Zimbardo Time Perspective Inventory and two measures of well-being: the Temporal Satisfaction With Life Scale and the Scales of Psychological Well-Being-short version. A Multivariate Analysis of Variance (MANOVA) was conducted to identify differences in time perspective dimensions and well-being among affective profiles. Four Structural Equation Models (SEM) were used to investigate which time perspective dimensions predicted well-being for each profile. **Results:** Comparisons between individuals at the extreme of the affective profiles model suggested that individuals with a self-fulfilling profile (high positive/low negative affect) were characterized by a “balanced” time perspective and higher well-being compared to individuals with a self-destructive profile (low positive/high negative affect). However, a different pattern emerged when individuals who differed in one affect dimension but matched in the other were compared to each other. For instance, decreases in the past negative time perspective dimension lead to high positive affect when negative affect is high (i.e., self-destructive vs. high affective) but to low negative affect when positive affect was high (i.e., high affective vs. self-fulfilling). The moderation analyses showed, for example, that for individuals with a self-destructive profile, psychological well-being was significantly predicted by the past negative, present fatalistic and future time perspectives. Among individuals with a high affective or a self-fulfilling profile, psychological well-being was significantly predicted by the present fatalistic dimension.

Conclusions: The interactions found here go beyond the postulation of a “balanced” time perspective being the only way of promoting well-being. Instead, it presents a more person-centered approach to achieve higher levels of emotional, cognitive, and psychological well-being.

Questions of Time and Affect:

A person's affectivity profile, time perspective, and well-being

Danilo Garcia^{1-5*}, Uta Sailer^{2, 3}, Ali Al Nima^{1, 3}, Trevor Archer^{2, 3}

¹Blekinge Center of Competence, Blekinge County Council, Karlskrona, Sweden

²Department of Psychology, University of Gothenburg, Gothenburg, Sweden

³Network for Empowerment and Well-Being, Sweden

⁴Centre for Ethics, Law and Mental Health, University of Gothenburg, Gothenburg, Sweden

⁵Department of Psychology, Lund University, Lund, Sweden

25

26

Abstract

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

Background: A “balanced” time perspective has been suggested to have a positive influence on well-being: a sentimental and positive view of the past (high Past Positive), a less pessimistic attitude toward the past (low Past Negative), the desire of experiencing pleasure with slight concern for future consequences (high Present Hedonistic), a less fatalistic and hopeless view of the future (low Present Fatalistic), and the ability to find reward in achieving specific long-term goals (high Future). We used the affective profiles model (i.e., combinations of individuals’ experience of high/low positive/negative affectivity) to investigate differences between individuals in time perspective dimensions and to investigate if the influence of time perspective dimensions on well-being was moderated by the individual’s type of profile.

Method: Participants ($N = 720$) answered to the Positive Affect Negative Affect Schedule, the Zimbardo Time Perspective Inventory and two measures of well-being: the Temporal Satisfaction With Life Scale and the Scales of Psychological Well-Being-short version. A Multivariate Analysis of Variance (MANOVA) was conducted to identify differences in time perspective dimensions and well-being among affective profiles. Four Structural Equation Models (SEM) were used to investigate which time perspective dimensions predicted well-being for each profile.

Results: Comparisons between individuals at the extreme of the affective profiles model suggested that individuals with a self-fulfilling profile (high positive/low negative affect) were characterized by a “balanced” time perspective and higher well-being compared to individuals with a self-destructive profile (low positive/high negative affect). However, a different pattern emerged when individuals who differed in one affect dimension but matched in the other were compared to each other. For instance, decreases in the past negative time perspective dimension lead to high positive affect when negative affect is high (i.e., self-destructive vs. high affective) but to low negative affect when positive affect was high (i.e., high affective vs. self-fulfilling). The moderation analyses showed, for example, that for individuals with a self-destructive profile, psychological well-being was significantly predicted by the past negative, present fatalistic and future time perspectives. Among individuals with a high affective or a self-fulfilling profile, psychological well-being was significantly predicted by the present fatalistic dimension.

Conclusions: The interactions found here go beyond the postulation of a “balanced” time perspective being the only way of promoting well-being. Instead, it presents a more person-centered approach to achieve higher levels of emotional, cognitive, and psychological well-being.

According to Zimbardo and Boyd (1999; 1271), time perspective is the process of assigning experiences “to temporal categories, or time frames, that help to give order, coherence, and meaning to those events.” The mental organization of time is typically anchored in the time referents of past, present, and future (Shmotkin & Eyal 2003). The way in which an individual evaluates each of these constitutes her/his time perspective, or time orientation (Wallace & Rabin 1960). According to time perspective theory, the way individuals view their past, present, and future influences their decisions and behavior.

One of the most widely used measures of time perspective is the Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd, 1999). The ZTPI measures five time dimensions: 1) *Past-Positive*, a nostalgic, positive attitude towards the past that is positively related to high self-esteem and happiness; 2) *Past-Negative*, a generally negative view of the past positively related to depression, low self-esteem, anxiety, sadness and aggression; 3) *Present-Hedonistic*, a hedonistic, enjoyment- and pleasure-oriented attitude towards time without worrying about the future associated to low need for predictability, poor impulse control and increased novelty seeking; 4) *Present-Fatalistic*, a fatalistic, helpless, and hopeless attitude toward the future and life related to aggression, anxiety, and depression; and 5) *Future*, an orientation that includes the planning for and achievement of future goals and the tendency to postpone direct gratification in favor of long-term goals (Zimbardo & Boyd 1999). In accordance with these findings, time perspective has also been found to influence cognitive well-being or an individual’s own evaluation of her/his life satisfaction (Diener, 1984). Whereas no single time perspective in itself fosters life satisfaction, it is predicted by a “balanced” time perspective: high

values on past positive, present hedonistic and future perspectives, and low values on past negative and present fatalistic perspectives (Boniwell et al. 2010). Moreover, personal characteristics that allow the individual to adapt and flourish in life (i.e., psychological well-being; Ryff, 1989) seem to also be related to the same pattern of “balanced” time perspective (Sailer et al., 2014). In other words, this suggests a complex interaction of time perspectives within the individual that influences well-being.

In accordance with such complex patterns between and within individuals, a correlational study found different patterns of time perspective to be associated to positive and negative affect. Positive affect was positively related to the present hedonistic and future time perspective, but negatively related to the past negative and present fatalistic time dimensions (Sailer et al., 2014). Negative affect on the other hand was positively related to the past negative and present fatalistic time perspective dimensions and negatively related to the present hedonistic time perspective dimension (Sailer et al., 2014). Although these results give an indication on the association between individuals’ time perspective and affectivity, the affective system is often described as a complex dynamic system composed of these two affectivity dimensions (i.e., positive affect and negative affect), which are independent of each other and regulate our approach and withdrawal behavior towards stimuli (e.g., Watson, Clark & Tellegen, 1988). Individuals characterized by high levels of positive affect exhibit a greater appreciation of life, more security, self-esteem and self-confidence (Archer et al., 2008; Costa and McCrae, 1980; Varg, 1997); they enjoy more social relations and assertiveness and are generally described as passionate, happy, energetic and alert (Watson & Clark, 1984; Watson & Pennebaker, 1989). In contrast, individuals characterized by high levels of negative affect experience greater stress and strain, anxiety and uncertainty over a wide range of circumstances and events over which they generally lack

control (Watson et al., 1986). The two affectivity dimensions are not only related to different behavior but also are probably influenced by the environment to different extent and have different genetic etiology (see Cloninger & Garcia, 2015). The independent inter-relationship of these two affectivity dimensions also implies that individuals do not only differ in affectivity between each other but also within themselves (Garcia, 2011). If so, individuals might differ in the way they perceive time depending on their affective profile (i.e., different combinations of high/low positive/negative affect) and what is more, the way in which time perspective is related to well-being might be moderated by the individuals' own affective profile.

Previously, Archer and colleagues (e.g., Archer, Adolfsson & Karlsson, 2008; Norlander, Bood & Archer, 2002) conceptualized how individuals' differ, between and within, in levels of affectivity by incorporating different combinations of individuals' recalled experience of positive and negative affect, resulting in different "affective profiles": (i) high positive affect and low negative affect, characterizing a "self-fulfilling" profile, (ii) high positive affect and high negative affect, characterizing a "high affective" profile, (iii) low positive affect and low negative affect, characterizing a "low affective" profile, and (iv) low positive affect and high negative affect, characterizing a "self-destructive" profile. Individuals with high negative affect, particularly those with a self-destructive profile compared to individuals with a self-fulfilling profile, report lower well-being, higher psychological and somatic stress, low energy, lack of dispositional optimism, heightened pessimism, high levels of non-constructive perfectionism, depression and anxiety, lower levels of constructive coping and higher levels of maladaptive coping, total stress at the work-place, more Type A behavior, lack of emotional stability and partner relationships, and high levels of external locus of control and impulsiveness (e.g., Andersson-Arntén, 2009; Garcia, 2011; 2012; Schütz, 2015; Norlander et al., 2002, 2005; Bood

et al., 2004). Thus, individuals with a self-destructive profile can be expected to have a less “balanced” perspective of time compared to individuals with any of the other profiles.

The affective profiles model allows the comparison between individuals who differ in their level of experienced affect in both dimensions, but also the comparison of individuals who match each other in one dimension and differ in their experience in the other affect dimension (i.e., allowing a within-individual comparison). For example, when individuals with a low affective profile are compared to their diametric opposites (i.e., individuals with a high affective profile), they show higher levels of somatic stress when doing a stressful task (Norlander et al., 2005). This may be because in contrast to individuals with a low affective profile, individuals with a high affective profile experience high positive affect, which may neutralize their experience of high negative affect and therefore, reduce stress (Fredrickson, 2006; Garcia & Siddiqui, 2009a). Nevertheless, individuals with any of these two profiles do not differ in life satisfaction between each other (Garcia & Siddiqui, 2009ab). This suggests that for individuals with a low affective profile, low levels of stress and high levels of life satisfaction are linked to their experience of low negative affect, while for individuals with a high affective profile this very same experience (i.e., low stress and high life satisfaction) is linked to high levels of positive affect (cf. Garcia, 2011; Schütz, 2015).

In addition, when individuals with a low affective profile are compared to individuals to whom they only partially differ in affectivity levels (i.e., self-destructive and self-fulfilling), individuals with a low affective profile report higher life satisfaction than individuals with a self-destructive profile and equally high levels of life satisfaction and equally low levels of stress as individuals with a self-fulfilling profile (Garcia, 2011). In other words, although both have low levels of positive affect, individuals with a low affective profile (low positive affect/low negative

affect) are more satisfied with their life than individuals with a self-destructive profile (low positive affect/ high negative affect). Individuals with a low affective profile (low positive affect/low negative affect) are also as satisfied with their life as individuals with a self-fulfilling profile (high positive affect/low negative affect), although the latter experience more positive affect.

In sum, depending on their profile, individuals are able to regulate their well-being, probably by specific strategies that fit their profile to maintain homeostasis in their affective system (cf. Garcia, Rosenberg, Erlandsson & Siddiqui, 2010). If so, different time perspectives might influence individuals' life satisfaction and psychological well-being depending on their affective profile. The present study investigated differences between individuals with different affective profiles with respect to their time perspective and well-being. We expected individuals with a self-fulfilling profile to be more "balanced" in their time perspective: more positive and less negative about their past, more hedonistic and less fatalistic about their present, and more future oriented. We also address the question whether or not the effect of the time perspective dimensions on psychological well-being and life satisfaction is moderated by the individual's type of profile.

Method

Ethical statement

After consulting with the Network for Empowerment and Well-Being's Review Board we arrived at the conclusion that the design of the present study (e.g., all participants' data were anonymous and will not be used for commercial or other non-scientific purposes) required only informed consent from the participants.

Participants and procedure

The present study was based on a sample of 720 participants with an age mean of 25.25 ± 11.73 (males = 247, females = 473, and 7 participants who didn't report their gender). They were students at one University and pupils at two high schools in the West of Sweden. All participants were informed that their participation was voluntary and anonymous. They were presented with a battery of instruments used to collect the relevant measures in the following order: background, time perspective, temporal satisfaction with life, psychological well-being, and affect.

Measures

Affect. The Positive Affect and Negative Affect Schedule (Watson, Clark & Tellegen, 1988) assesses the affective component of subjective well-being by requiring participants to rate on 5-point adjective scales to what extent (1 = *very slightly*, 5 = *extremely*) during the last few weeks they experienced 10 positive and 10 negative affective states. The positive affect scale includes adjectives such as strong, proud, and interested; and the negative affect scale includes adjectives such as afraid, ashamed, and nervous. The Swedish version has been used in previous studies (e.g., Garcia, Nima & Kjell, 2014; Nima, Archer & Garcia, 2012, 2013; Nima, Rosenberg, Archer & Garcia, 2013; Schütz, Archer & Garcia, 2013). Cronbach's α in the present study was .86 for positive affect and .85 for negative affect.

Time Perspective. The Zimbardo Time Perspective Inventory (Zimbardo & Boyd, 1999) consists of 56 items that measure the following five time dimensions: Past Positive (e.g., "It gives me pleasure to think about my past"), Past Negative (e.g., "I think about the good things that I have missed out on in my life"), Present Hedonistic (e.g., "Taking risks keeps my life from becoming boring"), Present Fatalistic (e.g., "Fate determines much in my life"), and Future (e.g., "I believe that a person's day should be planned ahead each morning"). The Swedish version has been used and in previous studies (e.g., Sailer, Rosenberg, Nima, Gamble, Gärling, Archer &

210 Garcia, 2014) and its psychometric properties have been validated in many different languages
 211 (Milfont, Andrade, Belo & Pessoa, 2008; Liniauskaite & Kairys, 2009; Díaz-Morales, 2006).
 212 Cronbach's α in the present study was .72 for Past Positive, .85 for Past Negative, .76 for Present
 213 Hedonistic, .63 for Present Fatalistic, and .70 for Future.

214 *Temporal Life Satisfaction.* The Temporal Satisfaction With Life Scale (Pavot, Diener &
 215 Suh, 1998) comprises 15-items rated on a 7-point Likert scale (1 = *strongly disagree*, 7 =
 216 *strongly agree*) assessing past (e.g., If I had my past to live over, I would change nothing),
 217 present (e.g., I would change nothing about my current life), and future life satisfaction (e.g.,
 218 There will be nothing that I will want to change about my future). The Swedish version of the
 219 instrument has been used in previous studies (Sailer et al., 2014; Garcia, Rosenberg & Siddiqui,
 220 2011). Cronbach's α in the present study was .92 for the whole scale.

221 *Psychological Well-Being.* The Psychological Well-Being scale, short version (Clarke,
 222 Marshall, Ryff & Wheaton, 2001) comprises 18 items including 3 items for each of the six
 223 dimensions. These dimensions are: self-acceptance (e.g., "I like most aspects of my
 224 personality"), personal growth (e.g., "For me, life has been a continuous process of learning,
 225 changing, and growth"), purpose in life ("Some people wander aimlessly through life, but I am
 226 not one of them"), environmental mastery (e.g., "I am quite good at managing the
 227 responsibilities of my daily life"), autonomy (e.g., "I have confidence in my own opinions, even
 228 if they are contrary to the general consensus"), and positive relations with others (e.g., "People
 229 would describe me as a giving person, willing to share my time with others"). The Swedish
 230 version has been used in previous studies (e.g., Garcia, 2011, 2013). Since the subscales have
 231 been found to have low reliability, the total psychological well-being score (i.e., the sum of the
 232 18 items) is recommended as a better and more reliable measure (Garcia & Siddiqui, 2009b). A

233 Cronbach's α of .78 was obtained for the total psychological well-being score in the present
234 study.

235 ***Statistical treatment***

236 The affective profiles were created by dividing self-reported positive affect and negative affect
237 scores each into high and low using a median split (Norlander, Bood & Archer, 2002). This
238 resulted in the following affective profiles: 222 "self-destructive" (low positive and high
239 negative affect), 131 "low affective" (low positive and low negative affect), 150 "high affective"
240 (high positive and high negative affect) and 217 "self-fulfilling" (high positive and low negative
241 affect).

242 *Missing data.* The majority of missing data was found to be missing completely at
243 random using *Little's Chi-Square* test; ($\chi^2 = 30.10$ ($df = 28$, $p = .36$) for self-destructive men, χ^2
244 $= 17.54$ ($df = 9$, $p = .04$) for low affective men, $\chi^2 = 26.79$ ($df = 20$, $p = .14$) for high affective
245 men, $\chi^2 = 17.61$ ($df = 15$, $p = .28$) for self-fulfilling men, $\chi^2 = 37.87$ ($df = 37$, $p = .43$) for self-
246 destructive women, $\chi^2 = 22.69$ ($df = 26$, $p = .65$) for low affective women, $\chi^2 = 26.14$ ($df = 27$, p
247 $= .51$) for high affective women and $\chi^2 = 57.24$ ($df = 28$, $p = .001$) for self-fulfilling women.
248 Next, the Expectation-Maximization Algorithm was used to replace missing values.

249 *Normality of sampling distributions of means.* Our sample size of 720 participants
250 included over 20 cases for each cell. Therefore, we anticipated normality of sampling
251 distributions of means. Indeed, according to the Central Limit Theorem, with sufficiently large
252 sample sizes, sampling distributions of means are normally distributed regardless of the
253 distributions of variables. (see Tabachnick & Fidell, 2007, p.78). In other words, our data met the
254 assumptions necessary to conduct a MANOVA.

Univariate outliers and normality. In order to determine and reduce the impact of variables with univariate outliers within the affective profiles we first standardized the scores by subtracting the mean from the individual's score and then dividing by the standard deviation. We then checked if any cases had larger standardized scores than ± 3.29 , as recommended by Tabachnick and Fidell (2007). 1 outlier was detected in temporal satisfaction with life, 1 in past negative, 1 in present fatalistic and 2 in future (i.e., standardized scores larger than ± 3.29). These outlier scores were changed to the next highest non-outlier score +1, as described by Tabachnick and Fidell (2007, p 77).

All following analyses were computed with these replaced values for the outliers and the original raw-scores. The dependent variables (the 5 time perspective dimensions, psychological well-being and temporal satisfaction) per affective profile were normally distributed with a skewness between .07 to -.77 and a kurtosis between .01 and -.84. Because our sample size is relatively large, these values are reasonable (see Tabachnick & Fidell, 2007, p.80). Visual inspection indicated no threats to linearity or homoscedasticity on the dependent variables (i.e., time perspective and well-being) for each affective profile. Thus, the assumptions were met to conduct the SEM.

Multivariate outliers. The 5 time perspective dimensions, psychological well-being and temporal satisfaction with life were checked for multivariate outliers within the affective profiles. The multivariate outlier detection by Mahalanobis distance identified three multivariate outliers, which were replaced as described above (Tabachnick & Fidell, 2007, p.76).

Multicollinearity and singularity. The correlations between dependent variables were all below -.59. These correlations, for each profile, were below -.54. Therefore, multicollinearity or

277 singularity was judged as unlikely to be present or a problem (see Tabachnick & Fidell, 2007,
278 p.88, who recommend .90 as threshold).

279 Differences in psychological well-being and temporal satisfaction with life between
280 affective profiles were investigated by a MANOVA. Psychological well-being and temporal
281 satisfaction with life served as dependent variables, affective profiles were the independent
282 variables. A further MANOVA was calculated to investigate differences between affective
283 profiles in the 5 dimensions of time perspective. Here, the mean scores on each of the time
284 perspective dimension scale served as dependent variables and affective profile as independent
285 variable. Each MANOVA, if significant regarding *Pillai's* criterion, was followed up by
286 ANOVA to test the effect of the profiles on each of the dependent variables and then post-hoc
287 tests with Bonferroni correction to investigate which profiles differed from each other.

288 *Homogeneity of variance-covariance matrices.* The Box's M test was significant at $p <$
289 .001 for the first MANOVA (i.e., the analysis investigating differences in psychological well-
290 being and temporal satisfaction with life between affective profiles) and at $p < .02$ (see Huberty
291 & Petoskey 2000, who suggest that a p value higher than the cut-off of $p = .005$ does not violate
292 the assumption of homogeneity of variance-covariance matrices) for the second MANOVA (i.e.,
293 the analysis investigating differences between affective profiles in the 5 dimensions of time
294 perspective). Nevertheless, the groups in each profile are relatively large and there are only small
295 group size differences (with a ratio of 1.69:1 regarding profiles the largest group was 222 self-
296 destructive profile and the smallest was 131 low affective profile). As a preliminary check for
297 robustness, large groups have larger variances and covariances in the dependent variables,
298 compared to small groups with smaller sizes; however, in our data there were only small
299 differences in the sizes of the variances and covariances. For example, regarding variances for

the first MANOVA the ratio of largest (.27) to smallest (.10) variance was 2.70:1 (temporal satisfaction with life). For example, regarding variances for the second MANOVA the ratio of largest (.31) to smallest (.22) variance was 1.41:1 (present fatalistic). MANOVA makes the assumption that the within-group covariance matrices are equal. If the design is balanced so that there is an equal number of observations in each cell, the robustness of the MANOVA tests is guaranteed. Thus, the assumptions of homogeneity of variance and covariance matrices were met for the conduction of MANOVAs (see Tabachnick & Fidell, 2007). Moreover, we used Pillai's criterion instead of Wilks' lambda because Pillai's criterion is more robust, appropriate, and more stringent criterion against heterogeneity of variance-covariance (see Tabachnick & Fidell, 2007, p.252).

Residuals of the covariances among observed variables in the SEM. All the residual covariances and standardized residual covariances among observed variables for each profile were zero, with the exception of covariances between psychological well-being and temporal life satisfaction which were between .10 for residual covariance and 3.28 for standardized residual covariance for each affective profiles. Nevertheless, the residuals for both variables were still centered around zero and the sample size used here is relatively large, thus, our multi-group moderation model fits the data reasonably well and the residuals were considered symmetrical (see Tabachnick & Fidell, 2007, p. 684).

Results

Differences in psychological well-being and temporal satisfaction with life between affective profiles

The affective profiles had a significant effect on the psychological well-being and temporal satisfaction with life ($F(6, 1432) = 43.80, p < .001, \text{Pillai's Trace} = .31, \text{Observed Power} = 1.00$).

323 The groups differed in psychological well-being ($F(3,716) = 59.57, p < .001$, Observed Power =
324 1.00) and in temporal satisfaction with life ($F(3,716) = 77.37, p < .001$, Observed Power = 1.00).

325 Individuals with a self-fulfilling profile scored higher in psychological well-being and in
326 temporal satisfaction with life than individuals with any of the other profiles. Individuals with a
327 high affective and low affective profile scored higher in both temporal satisfaction with life and
328 psychological well-being compared to individuals with a self-destructive profile (see details in
329 Table. 1).

330 *Differences in the 5 dimensions of time perspective between affective profiles*

331 The affective profiles had a significant effect on the time perspective dimensions ($F(15, 2142) =$
332 18.18, $p < .001$, *Pillai's Trace* = .35, Observed Power = 1.00). The groups differed in the past
333 negative ($F(3, 716) = 69.84, p < .001$, Observed Power = 1.00), past positive ($F(3, 716) = 9.40,$
334 $p < .001$, Observed Power = 1.00), present fatalistic ($F(3, 716) = 22.30, p < .001$, Observed
335 Power = 1.00), present hedonistic ($F(3, 716) = 5.76, p < .001$, Observed Power = .95), and future
336 ($F(3, 716) = 16.69, p < .001$, Observed Power = 1.00) dimensions. Compared to individuals with
337 any of the other profiles, individuals with a self-destructive profile scored higher in past negative
338 and present fatalistic time perspective. Individuals with a self-fulfilling profile and a high
339 affective profile scored higher in past positive time perspective compared to individuals with a
340 self-destructive profile. Individuals with a self fulfilling profile and a high affective profile
341 scored higher in present hedonistic as compared to individuals with a low affective time
342 perspective. Individuals with a self-fulfilling profile and a high affective profile scored higher in
343 the future dimension compared to individuals with a self-destructive profile and a low affective
344 profile. See Table 1 for the details in which the results from the post hoc tests, Bonferroni
345 correction: $p = .05 \div 5 = .01$, are presented.

Table 1 should be here

Multi-group moderation analysis

To investigate which dimensions of the time perspective are related to both psychological well-being and temporal satisfaction with life we performed a path analysis, using AMOS (version 20), in order to estimate interaction/moderation effects between affective profiles as moderator and dimensions of the time perspective as independent variables upon both the psychological well-being and temporal satisfaction with life. See figure 1. The structural equation model of multi-group analysis showed a $Chi-square = 23.22$; $DF = 4$; $p < .001$. The large sample in our present study ($N = 720$) may influence the $Chi-square$ value to be significant (see Tabachnick & Fidell, 2007, p. 695). However, the path model yielded a good fit, as indicated by comparative fit index = .98; goodness of fit index = .99; incremental fit index = .98, normed fit index = .97 and root mean square error of approximation = .08.

Four multi-group moderation analyses, one for each profile, showed that 16% to 33% of the variance of psychological well-being and 29% to 40% of the variance of temporal satisfaction with life could be explained by the 5 time perspective dimensions (see Table 2). Specifically, psychological well-being was significantly predicted by past positive and present hedonistic across all affective profiles (see Figure 2 to 5). This suggests that the type of affective profile does not moderate the influence of these two time perspective dimensions on psychological well-being. For individuals with a self-destructive profile, psychological well-being was significantly predicted by past negative, present fatalistic, and future (see Figure 2). Among individuals who experience high levels of positive affect (i.e., high affective and self-fulfilling), psychological well-being was significantly predicted by the present fatalistic dimension (see Figure 4 and 5). Temporal satisfaction with life was significantly predicted by past negative and past positive

across all affective profiles (see Figure 2 to 5). This suggests that the type of affective profile does not moderate the influence of these two time perspective dimensions on temporal satisfaction with life. Nevertheless, for individuals with a self-destructive profile temporal satisfaction with life was predicted by the future time perspective dimension (see Figure 2).

Figure 1-5 should be about here

Discussion

This study revealed differences in time perspective and well-being depending on an individual's affective profile (for a summary of the results see Figure 6). By looking at the differences between individuals at the diametrical ends of the model we first found that individuals with a self-fulfilling profile (i.e., high positive and low negative affect), compared to individuals with a self-destructive profile (i.e., low positive and high negative affect), scored high psychological well-being, high on temporal life satisfaction, high on the past positive and future time perspective dimensions, and low in the past negative and present fatalistic time perspective dimensions (see Figure 6, horizontal black arrows). This fits the description of a “balanced” time perspective that promotes high levels of well-being (Boniwell et al. 2010). Also being diametrically different to individuals with a low affective profile (low positive and low negative affect), individuals with a high affective profile (high positive and high negative affect) scored higher on the past negative, the present hedonistic and the future time perspective dimensions (see Figure 6, vertical black arrows). As in earlier studies (e.g., Garcia & Siddiqui, 2009a), no differences in well-being were found between individuals with high and low affective profiles. Nevertheless, individuals with any of these two profiles scored higher on both psychological well-being and temporal life satisfaction when compared to those with a self-destructive profile.

Hence, a low level of positive affect together with a high level of negative affect appears to be detrimental for psychological well-being and life satisfaction.

One of the strengths of the affective profiles model is that it allows the comparison of people who differ in one affectivity dimension while keeping the other constant. In this way we get to observe associations within this complex adaptive system (cf. Cloninger & Garcia, 2015). For example, decreases in a negative view of the past (i.e., the past negative time perspective dimension) might lead to high positive affect when negative affect is high (see grey arrows in Figure 6: self-destructive vs. high affective) but to low negative affect when positive affect is either high (see grey arrows in Figure 6: high affective vs. self-fulfilling) or low (see grey arrows in Figure 6: self-destructive vs. low affective). Increases in the future perspective dimension seem to only be associated with increases in positive affect; both when negative affect is high (see grey arrows in Figure 6: self-destructive vs. high affective) and when negative affect is low (see grey arrows in Figure 6: low affective vs. self-fulfilling). In contrast, increases in the present hedonistic dimension seem to lead to higher levels of positive affect only when negative affect is low (see grey arrows in Figure 6: low affective vs. self-fulfilling). Low levels in negative affect in turn were associated to decreases in the past negative time perspective dimension. In other words, to live happy in the present we need to let go of our past. The act of letting go of struggles is indeed one of the first steps of self-aware knowledge that is part of the Science of Well-Being (see Cloninger, 2004). All these complex interactions give a picture of how time perspective dimensions are associated to the affectivity system. Next we discuss how these dimensions predict well-being depending on the person's own affective profile.

Figure 6 should be about here

Interestingly, certain time perspective dimensions influenced well-being depending on the person's type of affective profile. Indeed, moderation analysis showed that the past positive and the present hedonistic time perspectives were positively associated to psychological well-being among individuals with any type of affective profile, while the present fatalistic dimension was negatively associated to psychological well-being in three out of the four affective profile groups—the exception was for individuals with a low affective profile. Individuals with a low affective profile have been found to downplay their emotions by either neutralizing positive and negative stimuli or, when faced with many positive things in life, to value neutral stimuli as more negative (Garcia & Siddiqui, 2009ab; Garcia, Rosenberg, Erlandsson & Siddiqui, 2010). Individuals with a low affective profile probably use these strategies in order to stay in an affective state that is more in tune to their profile. Together with our findings here, the present fatalistic time perspective affecting well-being negatively among people with any profile but among individuals with a low affective, this earlier findings might suggest that individuals with a low affective profile achieve homeostasis through being fatalistic of their present, that is, seeing their life path as controlled by external forces, avoiding to worry about the future because they also see it as uncontrollable, believing in luck or fate rather than hard work, and avoid setting goals. This strategy does indeed help individuals with a low affective profile to prevent unhappiness (i.e., low levels of negative affect) and is certainly in line with how their affectivity system dynamically regulates itself (cf. self-regulatory theory; Higgins, 2001). In other words, by being fatalistic about their present they prevent becoming disappointed and just the absence of that possible disappointment makes them feel satisfied with their life (Garcia, Rosenberg, Erlandsson & Siddiqui, 2010; see also Fredriksson, 2006; Garcia & Siddiqui, 2009a; Ramsay et al., 2015). Of course, at the same time the usage of this strategy limits their experience of

positive emotions, which might explain why they are not as satisfied with life as individuals with a self-fulfilling profile. The pattern that emerges for temporal life satisfaction differs from the one for psychological well-being. Temporal life satisfaction was associated positively with past positive and negatively with past negative for all four profiles. Suggesting that these two time perspective dimensions are equally important independent of type of affective profile. However, at least for individuals with a self-destructive profile the future time perspective dimension was also associated to high levels of life satisfaction.

Limitations and concluding remarks

Time perspective manipulation has been reported to influence experienced affect (Murgraff et al. 1999; Strack et al. 1985) and vice versa. The present analysis of time perspective, however, presents an affective profile background derived from healthy volunteers. Those individuals presenting less healthy profiles, such as the self-destructive profiles, may arise from a “prodromal” phase of affective ill-being or a “past-experienced” affective condition. Without repeated measures or a sub-longitudinal analysis, the status of differential time perspectives over the affective profiles remains uncertain. That being said, the interactions found here go beyond the postulation of a “balanced” time perspective being the only way of promoting well-being. Instead, it presents a more person-centered approach to achieve higher levels of emotional, cognitive, and psychological well-being.

References

Archer, T., Adolfsson, B., Karlsson, E. (2008). Affective personality as cognitive-emotional presymptom profiles regulatory for self-reported health predispositions. *Neurotoxicity Research*, 14, 21-44.

- 458 Boniwell, I., Osin, E., Linley, P. A., & Ivanchenko, G. (2010). A question of balance: Time
459 perspective and well-being in British and Russian samples. *Journal of Positive*
460 *Psychology*, 5 (1), 24–40.
- 461 Bruehlman-Senecal E, Ayduk O (2015) This too shall pass: temporal distance and the regulation
462 of emotional distress. *J Pers Soc Psychol.* 108(2):356-75. doi: 10.1037/a0038324.
- 463 Clarke, P. J., Marshall, V. M., Ryff, C. D., & Wheaton, B. (2001). Measuring psychological
464 well-being in the Canadian study of health and aging. *International Psychogeriatrics*,
465 13, 79–90.
- 466 Cloninger, C. R., & Garcia, D. (2015). The Heritability and Development of Positive Affect and
467 Emotionality. In M. Pluess (Ed.), *Genetics of Psychological Well-Being – The Role of*
468 *Heritability and Genetics in Positive Psychology* (97-113). New York: Oxford
469 University Press.
- 470 Demeyer I, De Raedt R (2013) Attentional bias for emotional information in older adults: the
471 role of emotion and future time perspective. *PLoS One.* 8(6):e65429. doi:
472 10.1371/journal.pone.0065429.
- 473 Díaz-Morales, J. F. (2006). Estructura factorial y fiabilidad del Inventario de Perspective
474 Temporal de Zimbardo. *Psicothema*, 18, 565-567.
- 475 Fredrickson, B.L. (2006). The broaden-and-build theory of positive emotions. In M.
476 Csikszentmihalyi, & I.S. Csikszentmihalyi (Eds.), *A life worth living: Contributions to*
477 *positive psychology* (pp. 85–103). New York: Oxford University Press.
- 478 Garcia, D (2011). Two Models of Personality and Well-Being among Adolescents. *Personality*
479 *and Individual Differences*, 50, 1208-1212. DOI: 10.1016/j.paid.2011.02.009.

- 480 Garcia, D. (2013). La vie en Rose: High Levels of Well-Being and Events Inside and Outside
481 Autobiographical Memory. *Journal of Happiness Studies*. DOI: 10.1007/s10902-013-
482 9443-x.
- 483 Garcia D, MacDonald S, Archer T (2015) Two different approaches to the affective profiles
484 model: median splits (variable-oriented) and cluster analysis (person-oriented). *PeerJ*.
485 3:e1380. doi: 10.7717/peerj.1380.
- 486 Garcia, D., Nima, A. A., & Kjell, O. N. E. (2014). The affective profiles, psychological well-
487 being, and harmony: environmental mastery and self-acceptance predict the sense of a
488 harmonious life. *PeerJ* 2:e259. DOI: 10.7717/peerj.259.
- 489 Garcia, D., Rosenberg, P., Erlandsson, A., & Siddiqui, A. (2010). On Lions and Adolescents:
490 Affective Temperaments and the Influence of Negative Stimuli on Memory. *Journal of*
491 *Happiness Studies*, 11, 477–495. DOI: 10.1007/s10902-009-9153-6.
- 492 Garcia, D., Rosenberg, P., & Siddiqui, A. (2011). Tomorrow I Could Be in Trouble...But The
493 Sun Will Come Out Next Year: The Effect of Temporal Distance on Adolescents'
494 Judgments of Life Satisfaction. *Journal of Adolescence*, 34, 751–757. DOI:
495 10.1016/j.adolescence.2010.08.006.
- 496 Garcia, D., & Siddiqui, A. (2009a). Adolescents' Affective Temperaments: Life Satisfaction,
497 Interpretation and Memory of events. *The Journal of Positive Psychology*, 4, 155–167.
498 DOI: 10.1080/17439760802399349.
- 499 Garcia, D, & Siddiqui, A. (2009b). Adolescents' Psychological Well-Being and Memory for Life
500 Events: Influences on Life Satisfaction with Respect to Temperamental Dispositions.
501 *Journal of Happiness Studies*, 10, 387 – 503. DOI: 10.1007/s10902-008-9096-3.

- 502 Higgins, E. T. (2001). Promotion and prevention experiences: Relating emotions to
503 nonemotional motivational states. In J. P. Forgas (Ed.), *Handbook of affect and social*
504 *cognition* (pp. 186-211). Hillsdale, NJ: Lawrence Erlbaum Associates.
- 505 Huberty, C. J., & Petoskey, M. D. (2000). Multivariate analysis of variance and covariance. In
506 H. Tinsley and S. Brown (Eds.) *Handbook of applied multivariate statistics and*
507 *mathematical modeling*. New York: Academic Press.
- 508 Liniauskaite, A., & Kairys, A. (2009). The Lithuanian version of the Zimbardo Time Perspective
509 Inventory (ZTPI). *Psichologija*, 40, 66-87.
- 510 Milfont, T. L., Andrade, P. R., Belo, R. P., Pessoa, V. S. (2008). Testing Zimbardo Time
511 Perspective Inventory in a Brazilian sample. *Interamerican Journal of Psychology*, 42,
512 49-58.
- 513 Murgraff V1, McDermott MR, White D, Phillips K (1999). Regret is what you get: the effects of
514 manipulating anticipated affect and time perspective on risky single-occasion drinking.
515 *Alcohol* 34(4):590-600.
- 516 Nima, A. A., Archer, T., & Garcia, D. (2012). Adolescents' happiness-increasing Strategies,
517 Temperament, and Character: Mediation models on Subjective Well-Being. *Health*, 4,
518 802-810. DOI: 10.4236/health.2012.410124.
- 519 Nima, A. A., Archer, T., & Garcia, D. (2013). The Happiness-Increasing Strategies Scales in a
520 Sample of Swedish Adolescents. *International Journal of Happiness and Development*,
521 1, 196–211.
- 522 Nima, A. A., Rosenberg, P., Archer, T., & Garcia, D. (2013). Anxiety, Affect, Self-esteem, and
523 Stress: Mediation and Moderation Effects on Depression. *PLOS ONE*. DOI:
524 10.1371/journal.pone.0073265.

- 525 Norlander, T., Bood, S.-Å., & Archer, T. (2002). Performance during stress: Affective
526 personality age, and regularity of physical exercise. *Social Behavior and Personality*, 30,
527 495–508.
- 528 Pavot, W., Diener, E., & Suh, E. (1998). The temporal satisfaction with life
529 scale. *Journal of Personality Assessment*, 2, 340-354.
- 530 Ramsey JL, Neupert SD, Mroczek DK, Spiro A (2015) The Effects of Daily Co-Occurrence of
531 Affect on Older Adults' Reactivity to Health Stressors. *Psychol Health*. 2015 Oct 30:1-
532 31.
- 533 Sailer, U., Rosenberg, P., Nima, A. A., Gamble, A., Gärling, T., Archer, T., Garcia, D. (2014). A
534 Happier and Less Sinister Past, a More Hedonistic and Less Fatalistic Present and a
535 more Structured Future: Time Perspective and Well-Being. *PeerJ* 2:e303. DOI:
536 10.7717/peerj.303.
- 537 Schütz, E., Archer, T. & Garcia, D. (2013). Character Profiles and Adolescents' Self-reported
538 Affect. *Personality and Individual Differences*, 54, 841–844. DOI:
539 10.1016/j.paid.2012.12.020.
- 540 Shmotkin D, Eyal N (2003). Psychological Time in Later Life: Implications for Counseling.
541 *Journal of Counseling and Development* 81(3):259-67.
- 542 Strack F, Schwarz N, Gschneidinger E (1985). Happiness and reminiscing: The role of time
543 perspective, affect, and mode of thinking. *Journal of Personality and Social Psychology*,
544 Vol 49(6): 1460-1469.
- 545 Tabachnick, B. G. & Fidell, L. S. (2007). Using multivariate statistics (5th, international ed).
546 Boston: Pearson Education.
- 547 Wallace M, Rabin AI. Temporal experience. *Psychol Bull*. 1960 May;57:213-36.

- 548 Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of
549 positive and negative affect: The PANAS scale. *Journal of Personality and Social
550 Psychology*, 54, 1063-1070.
- 551 Wuensch, K. (2005). Using SPSS to screen data. Retrieved August 28, 2011, from
552 <http://core.ecu.edu/psyc/wuenschk/SPSS/Screen-SPSS.doc>
- 553 Zimbardo, P.G., & Boyd, J.N. (1999). Putting time in perspective: A valid, reliable individual-
554 differences metric. *Journal of Personality and Social psychology*, 77, 1271–1288.

Table 1. Mean scores and standard deviation (*sd*) for all for each affective profile pertaining to psychological well-being, temporal life satisfaction and the time perspective dimensions: past negative, past positive, present fatalistic, present hedonistic and future.

	Self-destructive <i>n</i> = 222	Low-affective <i>n</i> = 131	High-affective <i>n</i> = 150	Self-fulfilling <i>n</i> = 217
Psychological Well-Being	3.86±.49	4.18±.58 ^{D***}	4.31±.54 ^{D***}	4.57±.63 ^{D, L, H***}
Temporal Life Satisfaction	3.42±1.11	4.36±1.03 ^{D***}	4.38±1.07 ^{D***}	4.89±.89 ^{D, L, H***}
Past Negative	3.29±.66 ^{L, H, F***}	2.57±.62	2.94±.69 ^{L, F***}	2.44±.64
Past Positive	3.20±.64	3.34±.60	3.45±.63 ^{D**}	3.49±.63 ^{D***}
Present Fatalistic	2.58±.52 ^{L, F***, H**}	2.32±.47	2.38±.56 ^{F**}	2.19±.46
Present Hedonistic	3.09±.45	3.00±.46	3.22±.45 ^{L**}	3.17±.53 ^{L*}
Future	3.14±.48	3.14±.45	3.39±.45 ^{D, L***}	3.38±.47 ^{D, L***}

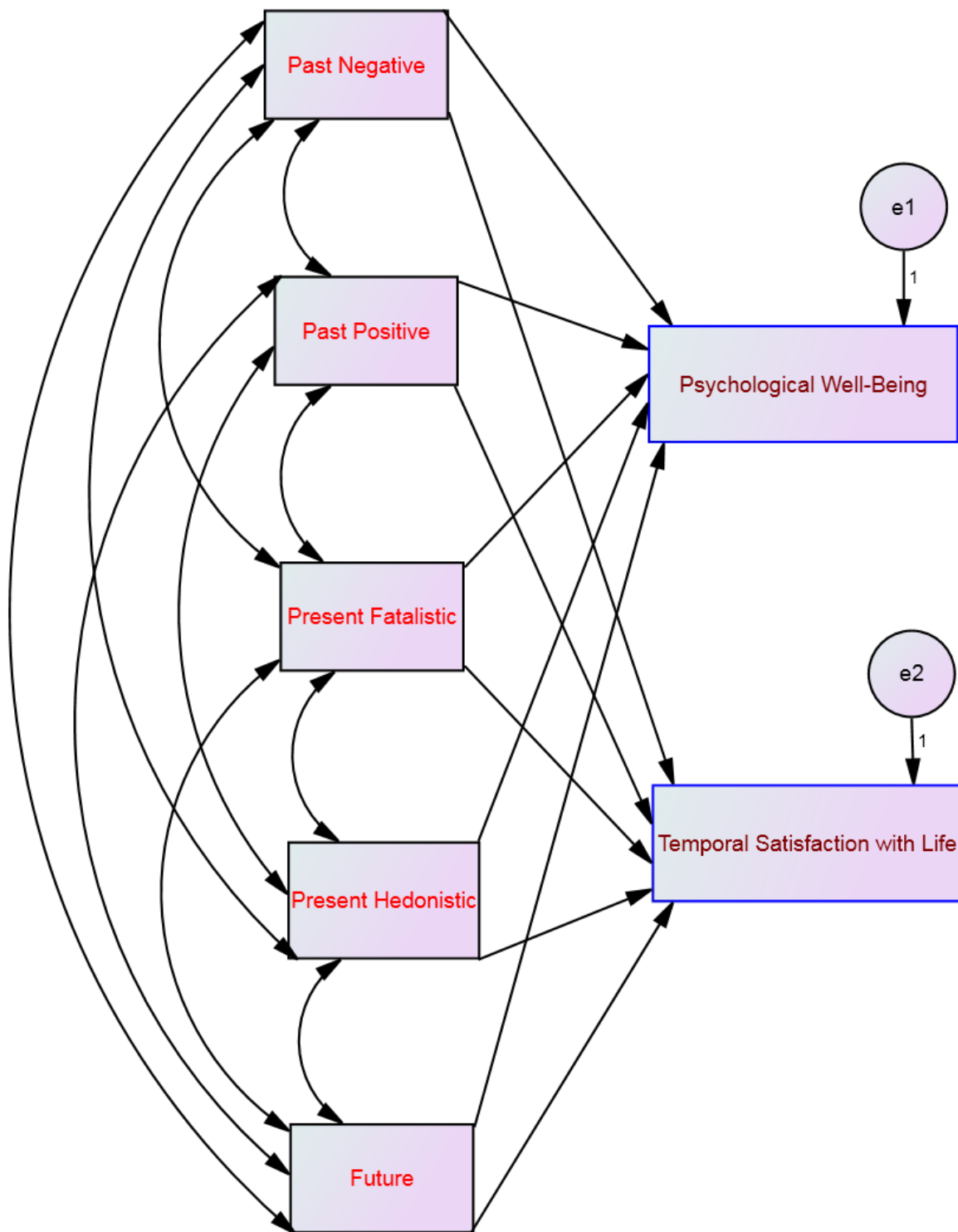
Notes. Values represent mean scores ± *sd* ; **p*<.05; ***p*< . 01.****p*<.001; ^D higher compared to the self-destructive; ^L higher compared to the low affective; ^H higher compared to the high affective; ^F higher compared to the self fulfilling.

Table 2. Structural coefficients for the SEM of multi-group moderation among affective profiles as moderator variables and the time perspective dimensions as predictor variables on both psychological well-being and temporal satisfaction with life.

Predictor	Outcome	β	SE	<i>B</i>	<i>P</i>
<i>Self-destructive = 222</i>					
Past negative	Psychological well-being	-.18	.05	-.24	<.001
Past positive		.27	.05	.35	<.001
Present fatalistic		-.14	.06	-.15	<.05
Present hedonistic		.15	.07	.13	<.05
Future		.16	.06	.15	<.01
<i>R</i> ²	.28				
Past negative	Temporal satisfaction	-.82	.10	-.49	<.001
Past positive		.53	.10	.31	<.001
Present fatalistic		.06	.13	.03	.63
Present hedonistic		.10	.14	.04	.49
Future		.28	.12	.12	<.05
<i>R</i> ²	.40				
<i>Low-affective n = 131</i>					
Past negative	Psychological well-being	-.06	.08	-.06	.45
Past positive		.42	.08	.44	<.001
Present fatalistic		-.03	.10	-.03	.75
Present hedonistic		.29	.10	.23	<.01
Future		-.09	.10	-.07	.35
<i>R</i> ²	.28				
Past negative	Temporal satisfaction	-.69	.14	-.41	<.001
Past positive		.61	.14	.35	<.001
Present fatalistic		.12	.18	.05	.52
Present hedonistic		.10	.18	.04	.57
Future		-.21	.18	-.09	.23
<i>R</i> ²	.30				
<i>High-affective n = 150</i>					
Past negative	Psychological well-being	-.02	.06	-.03	.74
Past positive		.35	.06	.41	<.001
Present fatalistic		-.30	.07	-.32	<.001
Present hedonistic		.37	.09	.31	<.001
Future		.13	.08	.11	.10

R²		.33			
Past negative		-.64	.13	-.41	<.001
Past positive		.39	.13	.23	<.01
Present fatalistic	Temporal satisfaction	.04	.15	.02	.78
Present hedonistic		.19	.19	.08	.33
Future		.30	.17	.13	.07
R²		.29			
Self-fulfilling n = 217					
Past negative		-.02	.07	-.02	.47
Past positive		.30	.07	.30	<.001
Present fatalistic	Psychological well-being	-.20	.10	-.14	<.05
Present hedonistic		.22	.08	.19	<.01
Future		.11	.09	.09	.19
R²		.16			
Past negative		-.68	.08	-.48	<.001
Past positive		.39	.08	.28	<.001
Present fatalistic	Temporal satisfaction	.08	.12	.04	.49
Present hedonistic		.12	.10	.07	.25
Future		.09	.10	.05	.42
R²		.36			

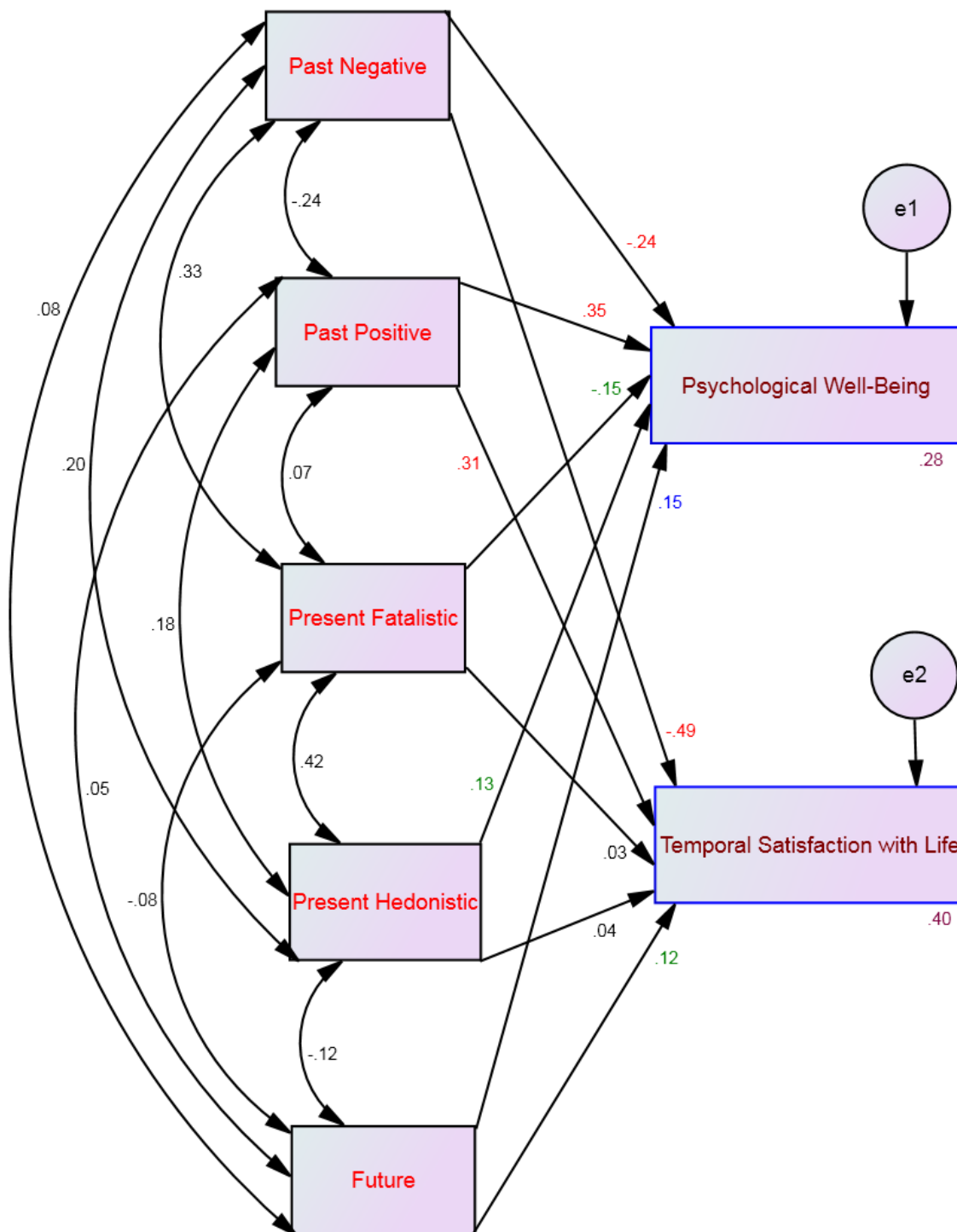
Note: Significant regression weights are shown in bold type.



566

567 **Figure 1.** Hypothesized structural equation model of the time perspective dimensions predicted
 568 both the psychological well-being and temporal satisfaction with life as the dependent variables
 569 among four affective profiles.

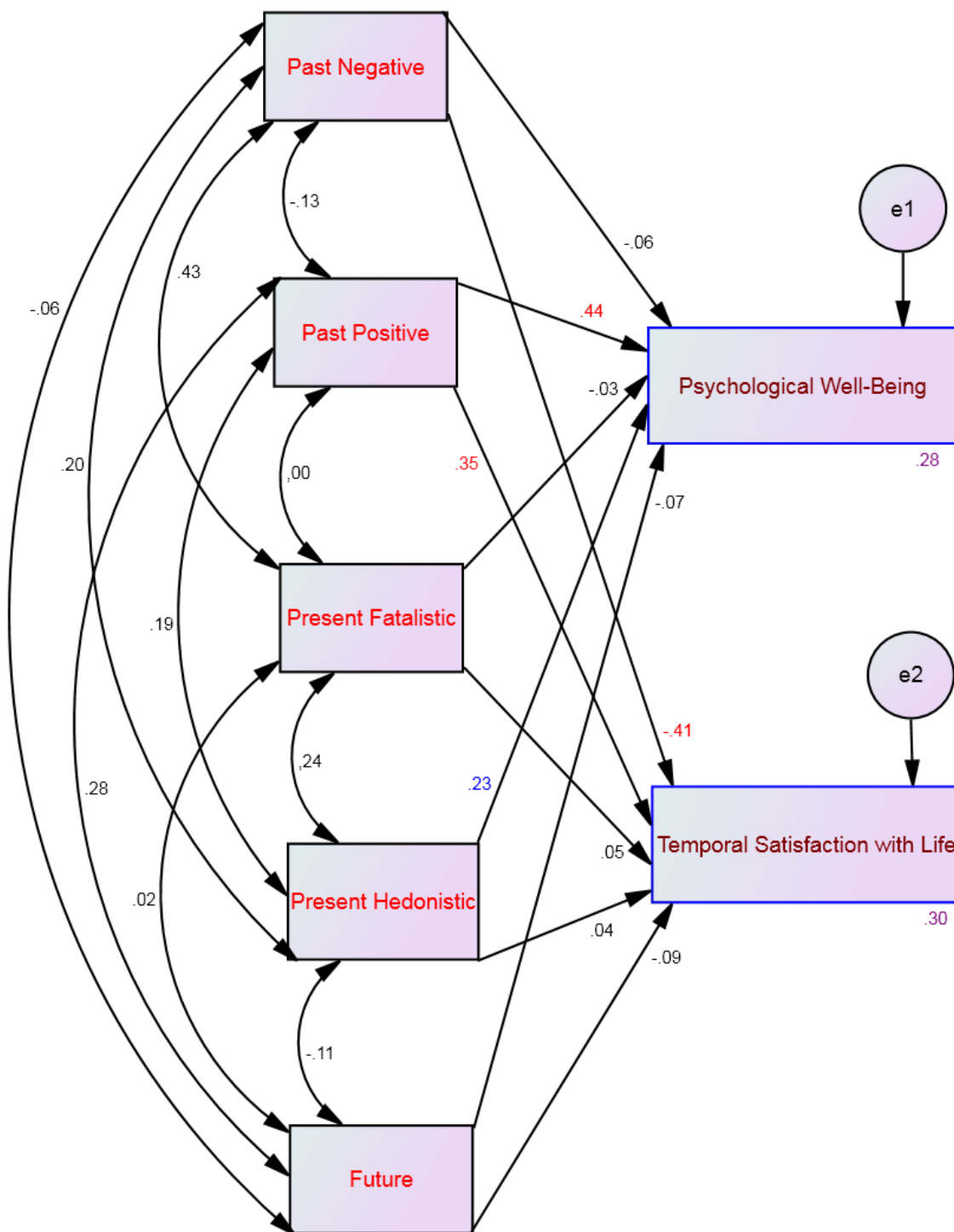
570



571

572 **Figure 2.** SEM for the self-destructive profile showing all correlations (between time perspective
573 dimensions) and all paths (from time perspective to well-being) and their standardized parameter

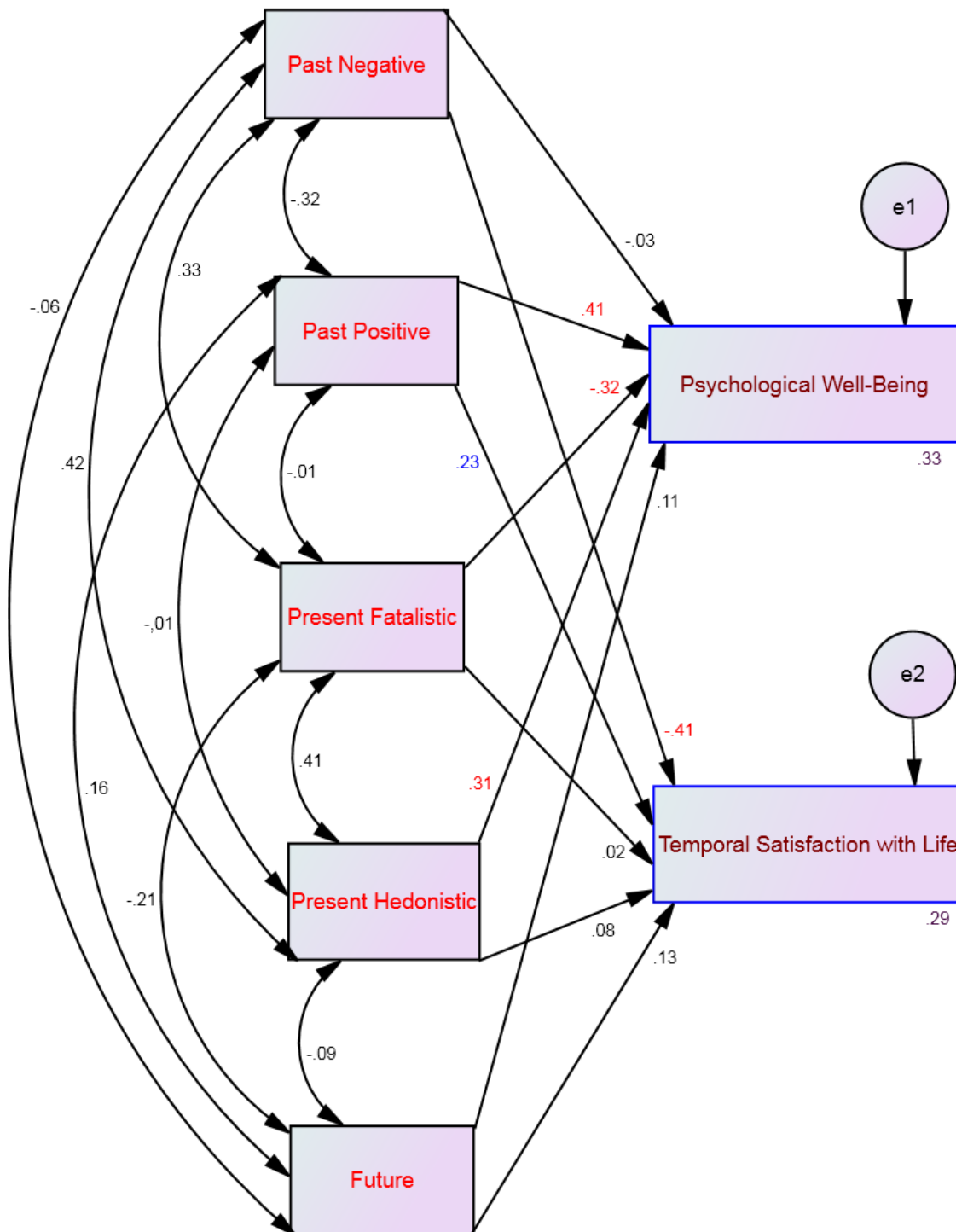
574 estimates. *Chi-square* = 23.22; *df* = 4; $p < .001$; *comparative fit index* = .98; *goodness of fit index* =
 575 .99; *incremental fit index* = .98, *normed fit index* = .97 and *root mean square error of approximation*
 576 = .08. Red standardized parameter estimates of regression weights are significant at the $p < .001$
 577 level, blue standardized parameter estimates of regression weights are significant at the $p < .01$
 578 level and green standardized parameter estimates of regression weights are significant at the $p <$
 579 .05 ($n = 222$).



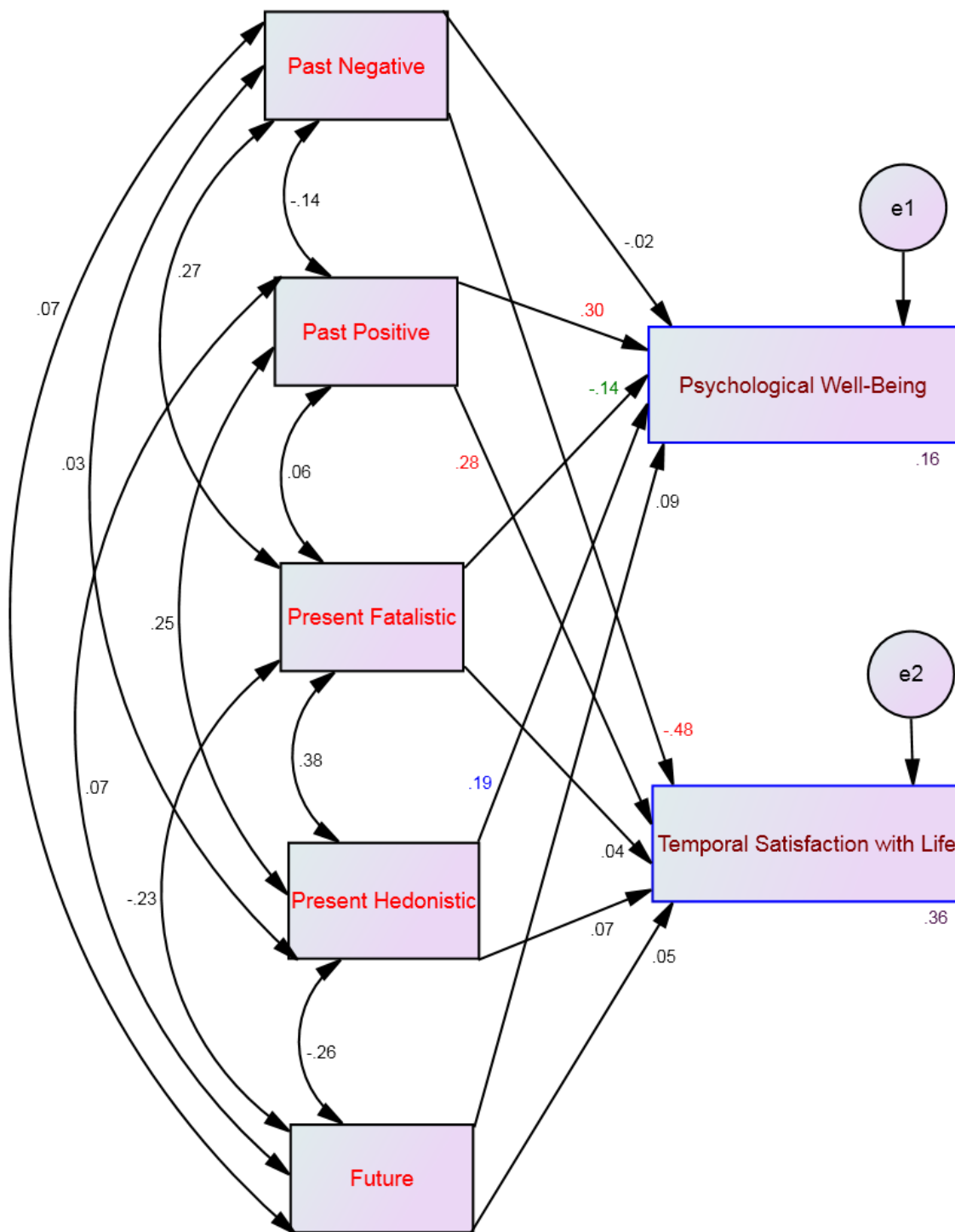
580

581 **Figure 3.** SEM for the low affective profile showing all correlations (between time perspective
582 dimensions) and all paths (from time perspective to well-being) and their standardized parameter
583 estimates. *Chi-square* = 23.22; *df* = 4; *p* < .001; *comparative fit index* = .98; *goodness of fit index*
584 = .99; *incremental fit index* = .98, *normed fit index* = .97 and *root mean square error of*

approximation = .08. Red standardized parameter estimates of regression weights are significant at the $p < .001$ level, blue standardized parameter estimates of regression weights are significant at the $p < .01$ level and green standardized parameter estimates of regression weights are significant at the $p < .05$ ($n = 131$).



590 **Figure 4.** SEM for the high affective profile showing all correlations (between time perspective
 591 dimensions) and all paths (from time perspective to well-being) and their standardized parameter
 592 estimates. *Chi-square* = 23.22; *df* = 4; $p < .001$; *comparative fit index* = .98; *goodness of fit index*
 593 = .99; *incremental fit index* = .98, *normed fit index* = .97 and *root mean square error of*
 594 *approximation* = .08. Red standardized parameter estimates of regression weights are significant
 595 at the $p < .001$ level, blue standardized parameter estimates of regression weights are significant
 596 at the $p < .01$ level and green standardized parameter estimates of regression weights are
 597 significant at the $p < .05$ ($n = 150$).



598

599 **Figure 5.** SEM for the self-fulfilling profile showing all correlations (between time perspective
600 dimensions) and all paths (from time perspective to well-being) and their standardized parameter
601 estimates. *Chi-square* = 23.22; *df* = 4; *p* < .001; *comparative fit index* = .98; *goodness of fit index*
602 = .99; *incremental fit index* = .98, *normed fit index* = .97 and *root mean square error of*

603 *approximation* = .08. Red standardized parameter estimates of regression weights are significant
 604 at the $p < .001$ level, blue standardized parameter estimates of regression weights are significant
 605 at the $p < .01$ level and green standardized parameter estimates of regression weights are
 606 significant at the $p < .05$ ($n = 217$).

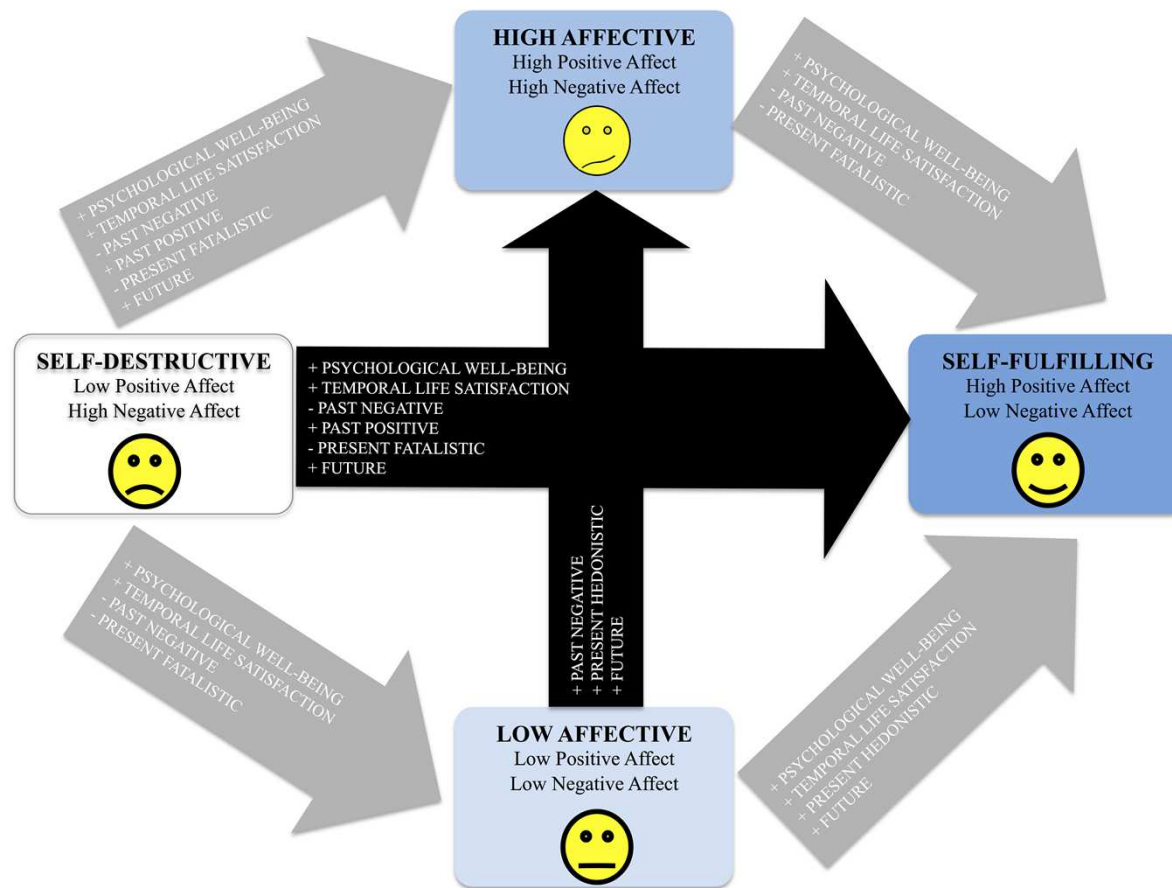


Figure 6. Differences (black arrows) found between individuals with affective profiles that are at their extremes of the model: self-destructive versus self-fulfilling (low-high positive affect, high-low negative affect) and low affective versus high affective (low-high positive affect, low-high negative affect). Differences (grey arrows) found when individuals were matched in one affective dimension, and differed in the other (i.e., within differences): self-destructive versus high affective (matching: high-high negative affect, differing: low-high positive affect), self-destructive versus low affective (matching: low-low positive affect, differing: high-low negative affect), high affective versus self-fulfilling (matching: high-high positive affect, differing: high-low negative affect), and low affective versus self-fulfilling (matching: low-low negative affect, differing: low-high positive affect).

Note. Reprinted with permission from Well-Being and Human Performance Sweden AB.