

## Well-being and positive future thinking for the self versus others

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Positive future thinking (having things to look forward to) is an important element of well-being. Two studies tested whether the link between well-being and positive future thinking is restricted to self-related future thinking or extends to more general, script-like mental representations of the future. Well-being in a community sample (Study 1) was related to ability to think of positive future outcomes for self but not for others; parasuicidal individuals compared to non-suicidal controls (Study 2), showed a reduced ability to think of self-related future thoughts but showed no effect on other-related future thinking. It appears that the lack of personal, positive future thinking shown by those individuals with clinical and non-clinical deficits in well-being is not due to having a restricted semantic database of potential positive future experiences; it may, rather, reflect an inability to see how such experiences would happen to them.

A positive view of the future is an important element of psychological well-being. In the clinical literature, those with very low levels of well-being, for example those who are depressed or suicidal, show a lack of anticipation of future positive experience, usually in the absence of increased negative anticipation (e.g., MacLeod & Byrne, 1996; MacLeod, Pankhania, Lee, & Mitchell, 1997). These findings further bolster the distinction between positive and negative aspects of experience and reinforce the importance of positive future-directed thinking to well-being. In the non-clinical literature, the importance of anticipating future positive outcomes is represented by approaches that view well-being as the result of people being engaged in striving towards valued goals that they believe are likely to happen (Schmuck & Sheldon, 2001).

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Understanding what underlies the lack of positive anticipation found in some individuals is therefore important, both in terms of understanding the processes involved and providing clues about possible interventions to enhance well-being and reduce psychological distress. MacLeod and Salaminiou (2001) suggested one possibility, which is that those who are unable to think of things they are looking forward to in the future may have impoverished cognitive representations of the pool of possible future positive experiences. If this were true then those who have low expectations of experiencing positive outcomes in the future should also show a deficit in being able to think about positive future experiences in general and not just for themselves. Alternatively, it may be that, as has been found in many cognitive biases (e.g., Williams, Watts, MacLeod, & Mathews, 1997), any difference between high and low well-being individuals is only apparent in relation to self-relevant material. This distinction between self- and other-related expectancies relates very closely to Atance and O'Neill's distinction between semantic and episodic future thinking (Atance & O'Neill, 2001). Building on the distinction between episodic and semantic memory, Atance and O'Neill (2001) suggest that episodic future thinking is the ability to think about the future in a personally involved way—a sort of pre-experiencing of a future event. Semantic future thinking, in contrast, is knowing in a fairly script-like, general way, the sorts of things that happen in the future. Although the semantic–episodic distinction could in principle be orthogonal to a self–other distinction, asking people to think of things they are looking forward to is likely to elicit predominantly episodic, self-related future thinking. An important research question is whether people who show difficulties in this kind of self-related, episodic future thinking also show such difficulties when they are cued specifically to engage in more semantic, non-self-related future thinking. The novel aspect of the two studies being reported here involves asking people to think in this sort of way about the future and contrasting it with self-related, episodic future thinking. Applying the concepts of episodic and semantic future thinking to the reduced positive future thinking of those in low well-being has the potential to extend understanding of the phenomenon and inform interventions.

Two studies are reported that assessed episodic, self-related positive future thinking and semantic, other-related future thinking in those who were high or low in psychological well-being. The first study measured two different aspects of well-being—subjective well-being and psychological well-being—in a community sample. The second study compared a sample of those who had recently engaged in parasuicide with a non-suicidal control group. In both studies, participants were asked to think of positive future events for themselves and for hypothetical others. In line with previous research we predicted that low well-being participants would be less able than those high in well-being to think of positive future experiences for

themselves. There were less clear grounds for predictions concerning positive expectations for others, but given the general finding of mood-related cognitive effects being restricted to self-relevant material, we predicted that there would be no correlation between well-being and positive other-related future thinking (Study 1) and that the groups would not differ on other-related future thinking (Study 2).

## STUDY 1

### Method

#### *Participants*

Participants were 84 adults from a community sample that volunteered to participate in a study on factors related to positive future thinking (see MacLeod & Conway, 2005). The future thinking for self data (but not for others) on this sample have been described elsewhere by MacLeod and Conway (2005) to address different research questions. The mean age of the sample was 48 years ( $SD = 15.7$ ). There were 40 men and 44 women, and the sample was almost exclusively White ( $N = 82$ ).

#### *Measures and procedure*

*Control task (FAS).* This is a standard task that provides a general measure of verbal fluency (Lezak, 1995). It involves asking the participant to say aloud as many words as they can think of beginning with each of three letters (F, A, S), excluding proper nouns, numbers, the same word with a different suffix, and repetitions. Participants are allowed 1 minute for each letter, and the three letters are given in a fixed order. The score is the mean number of acceptable words generated for each letter.

*Future Thinking Task.* Positive future thinking for the self was assessed using the standard Future Thinking Task (FTT; MacLeod & Byrne, 1996). This task requires participants to think of future experiences occurring over three time periods (“the next week, including today”, “the next year”, and “the next 5–10 years”). The time periods are presented verbally, one at a time and in the order given above. There are two conditions, one where participants are asked to think of future positive experiences (things they are looking forward to) and the other where they are asked to think of future negative experiences (things that they are not looking forward to). Only the positive condition was used in this study. Participants are given 1 minute to generate as many responses as possible. The score for each time period is the total number of responses given in a particular condition time period (where a participant repeats a response across different time categories, the response

is only included the first time it is mentioned). The score for total positive anticipation is the sum of scores for each of the time periods within the positive condition. Previous studies looking at the different time periods have almost always found no differential effects relating to time periods.

To assess future thinking for others, participants were presented with the same task but asked to generate things that they thought other people who were participating in the same study might have said when given this task. Piloting showed that participants reported being unable to understand what was being asked for when presented with this task for hypothetical others unless they had first done the task for themselves. Participants were only able to do the task when it was presented after they completed the standard task for themselves, and the instructions asked them to now think of the sorts of things that other people who had done the task might have come up with. So all participants completed the task for self, then the task for others.

A proportion of items (22%) were repeated in self and other conditions. In order to create a clearer distinction between self and other conditions these shared items were treated as a separate category in the analyses. Only those items that were clearly repeated were identified as such. However, because there was sometimes a degree of ambiguity about whether a response for self and others was the same or not a rater blind to group membership identified repeated responses and a second, blind, independent rater categorised a random 10% sample of responses. There was high agreement on categorisation ( $Kappa = .96$ ).

*Subjective well-being.* Subjective well-being followed convention in previous research by calculating a composite variable consisting of combining standardised scores on positive affect, negative affect (subtracted) and life satisfaction (see Diener, Suh, Lucas, & Smith, 1999). Positive affect and negative affect were measured using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and life satisfaction by the Temporal Satisfaction with Life Scale total score (TSWLS; Pavot, Diener, & Suh, 1998).

*Psychological well-being.* Ryff and Keyes (1995), proposed a theory-driven model of well-being that de-emphasises the subjective component in favour of commonly accepted dimensions of positive functioning. The model outlines six dimensions, which the authors call “psychological well-being”: autonomy, self-acceptance, personal growth, purpose in life, positive relations with others and environmental mastery. The original scale contained 20 items per subscale but practical constraints have meant versions containing as few as three items per subscale have been used. The present study used the 54-item version of the measure of these constructs

(9 items per construct), which has been shown to have adequate internal consistency of subscales (Ryff & Keyes, 1995)

Participants completed the tasks in the order given above. A number of other tasks were completed that were not the focus of this study and will not be reported in this paper. These tasks had a quite different focus on potential factors underlying positive future thinking and are reported in MacLeod and Conway (2005).

## Results and discussion

Responses across the task were categorised as self-only ( $M = 11.4$ ,  $SD = 4.3$ ), other-only ( $M = 16.5$ ,  $SD = 5.5$ ) or shared ( $M = 8.0$ ,  $SD = 5.3$ ). Correlational analyses were carried out looking at the relationship of the two indices of well-being to the number of responses in each of the three categories of future thinking. Although Ryff and Keyes' psychological well-being measure has six subscales the subscales tend to be highly intercorrelated and a principal components analysis of the current data showed a clear one-factor solution—eigenvalues (variance explained): 3.31 (56%); 0.92 (15%); 0.66 (11%); 0.54 (9%); 0.33 (6%); 0.24 (4%). The loadings of the individual variables on the single factor were: Autonomy (.61), environmental mastery (.79), positive relations (.56), purpose in life (.86), self acceptance (.82), personal growth (.76). Therefore, a total psychological well-being score was adopted. The total scale had an acceptable level of internal reliability ( $\alpha = .84$ ), further confirming the univariate structure of the scale. The correlations are shown in Table 1.

Number of self-only positive future thoughts correlated significantly with both subjective well-being and psychological well-being.<sup>1</sup> Neither thoughts about others or thoughts shared between self and others correlated with

TABLE 1  
Correlations of well-being and number of items generated in future thinking for self-only, other-only, and shared categories

	<i>PWB</i>	<i>Self-only</i>	<i>Other-only</i>	<i>Shared</i>	<i>FAS</i>
<i>SWB</i>	.39**	.23*	-.08	.17	.05
<i>PWB</i>		.30**	.10	.06	.12
<i>Self-only</i>			.41**	.01	.37**
<i>Other-only</i>				-.12	.40**
<i>Shared</i>					.15

Note: SWB = subjective well-being; PWB = psychological well-being. \* $p < .05$ ; \*\* $p < .01$ .

<sup>1</sup> Self-only thoughts correlated significantly with each of the six individual psychological well-being scales, with the exception of autonomy.

either type of well-being. Verbal fluency did not correlate with either type of well-being, though not surprisingly it did correlate with two of the fluency measures. When other-only and shared thoughts, as well as verbal fluency, are partialled out, the relationship between self-only and subjective well-being,  $r(79) = .27, p < .05$ , remained intact, as did the relationship between self-only and psychological well-being,  $r(79) = .28, p < .01$ . It appears that number of positive thoughts about the future that are unique or idiosyncratic to the individual (episodic) are related to both subjective and psychological well-being, but more script-like (semantic) thoughts—those for the self that are also mentioned for others and those mentioned for others only—are not related to well-being.

The sample consisted of volunteers from the community and therefore showed these relationships within a normal range of well-being. It is not clear whether similar effects would be found in those with more severe, clinical levels of low well-being.

## STUDY 2

Study 2 aimed to see whether the findings in Study 1 would be replicated with a clinical sample. Those who have recently engaged in an episode of parasuicide may reasonably be considered to be among those lowest in well-being and have been found to demonstrate a clear reduction in positive future thinking for themselves (e.g., MacLeod et al., 1997). Study 2 used a similar methodology as Study 1 to test whether parasuicide patients would show levels of future thinking for others that were comparable to non-suicidal, controls at the same time as showing the expected reduction in positive future thinking for the self. Differences from Study 1 were that a between-groups design was used and only subjective well-being was measured due to time constraints and the length of the psychological well-being measure.

## Method

### *Participants*

Forty-eight participants were recruited from individuals presenting at the Accident and Emergency Department at a large London hospital. The parasuicide group consisted of 24 individuals (15 women and 9 men; mean age 35 years) presenting following an episode of parasuicide (all overdose). All were assessed within three days of the parasuicidal act, as close as possible to the time of the parasuicidal act. Mean duration between overdose and interview was 27.48 hours ( $SD = 17.5$ ). Eleven were presenting at A&E after their first parasuicidal act, ten reported one previous episode, and three

estimated that they had multiple previous episodes. The control group consisted of 13 women and 11 men (with a mean age of 40 years) presenting at A&E for reasons other than self-harm (mainly minor accidents). The two groups were matched on age,  $t(46) = 1.40, p = .18$ , and gender,  $\chi^2(1) = 0.56, ns$ .

### Measures and procedure

The measures and procedure for the Control Task and Future Thinking Task were the same as for Study 1. Participants also completed a number of unrelated measures that are not reported here. As in Study 1, responses that were repeated in self and other conditions (21%) were removed to form a separate category. A second rater blind to condition and initial ratings showed high agreement with the initial rater on a random 10% sample (Kappa = .82).

### Results and discussion

Analysis was initially through a Group (low well-being, high well-being)  $\times$  Condition (self, other, shared) mixed-model analysis of covariance (ANCOVA) with FAS as a covariate. FAS was used as a covariate because although the groups did not differ significantly on FAS,  $t(46) = 1.19, p = .239$ , it was significantly correlated with the measures of future thinking (mean  $r = .44, p < .001$ ). Covarying FAS produces effects that are free from the influence of general verbal fluency, similar to the effects of partialling FAS out of the correlations in Study 1.

There was a significant main effect of group,  $F(1, 44) = 9.69, p = .003$ , due to controls giving more responses than patients, but no main effect of condition ( $F < 1$ ). The predicted Group  $\times$  Condition interaction,  $F(2, 88) = 3.25, p = .044$ , was significant. Table 2 shows the means and standard deviations for the two groups on future thinking for self, for others and for number of shared items. For ease of comparison with other studies, unadjusted means are shown; adjusted means were only marginally different.

TABLE 2  
Means (standard deviations) and significance of differences of each group on future thinking variables

Variable	Parasuicide	Control	Difference
Total PosFT-self	5.12 (3.95)	9.34 (4.82)	$t(46) = 3.28, p = .002$
Total PosFT-other	11.67 (5.25)	13.30 (5.15)	$t(46) = 1.07, p = .287$
Total PosFT-shared	2.87 (4.07)	8.00 (4.67)	$t(46) = 4.01, p < .001$

Note: Total PosFT-self = total positive future thinking items for self only; Total PosFT-other = total positive future thinking items for others only; Total PosFT-shared = total positive future thinking items shared across self and other.

Also shown is the significance of difference between the groups for each variable with FAS as a covariate.

Parasuicide patients, compared to controls, provided fewer things that they were looking forward to for themselves but did not differ on the number of things they thought that other people would look forward to. In addition, the parasuicide patients produced fewer shared items than did the controls.

## GENERAL DISCUSSION

In both studies, a relationship emerged between well-being and reduced positive thinking for the self. In a community sample there was a significant correlation between two different aspects of well-being and positive thoughts about the future for oneself. In Study 2 those who had recently engaged in parasuicidal behaviour showed reduced positive future thinking for themselves when compared with controls. These results, which are not the main focus of the present study, are unsurprising and consistent with previous findings. It should also be noted that the relationship between well-being and future thinking for the self in Study 1 has already been reported (MacLeod & Conway, 2005). The present studies are the first to extend previous findings by showing that this effect is not shown for positive future thinking for others: there was no relationship between well-being and other-related future thinking in community participants and parasuicide patients showed no deficit in being able to think about the sorts of things that others look forward to.

The results support the primacy of positive future thinking for the self and do not support the idea that low well-being, either at the clinical or non-clinical level, will be associated with diminished cognitive representations of possible future positive outcomes. In low well-being, episodic positive future thinking, where someone is able to project into the future in a personally involved way, is reduced; script-like, semantic future thinking is not affected. The picture that emerges is of individuals who can bring to mind the theoretical possibilities of future pleasurable and meaningful experiences but are not engaged with them in a personal way to the extent that they look forward to those things themselves. One possible reason for this is that they do not believe that they are likely to happen to them. Vincent, Boddana, and MacLeod (2004) found that, compared to controls, parasuicide patients were equally able to think of goals for themselves but thought those goals were less likely to be attained and were less able to think of plans to bring those goals about. It appears that those low in well-being can think of hypothetical future events, even to the extent of thinking about such things for themselves but they do not think that those things are likely to happen to them. Hence they are not able to look forward to them as looking forward to things



entails a degree of belief in likelihood of them happening. The database of possibilities to which the search for “self” items is directed is relatively impoverished. In addition, some candidate events that are generated may be discarded because they are thought to be too unlikely to actually happen. Rather than being disengaged, those low in well-being appear to be *painfully engaged* with the future—they can see the hypothetical repertoire of future enjoyable and meaningful experiences but do not see them as possibilities for themselves.

The two studies produced similar results, suggesting continuity across different degrees of low well-being. The interesting difference between the studies was that in Study 1 there was no relationship between well-being and shared items, whereas in Study 2, parasuicide patients produced fewer shared items than controls. Shared items were often, though not always, script-like items such as “having children”, “spending time with family”. In Study 2, such items were behaving like self-items, in that the parasuicide group produced fewer of them. This suggests that at more severe levels of impaired well-being not only are individualised anticipated events impaired but standard, common events are not cued by asking for things looked forward to. Again, this could be because they are deemed unlikely or because despite being thought of as likely events they do not elicit any anticipatory pleasure. It is, in fact, difficult to clearly separate out self- and other-related future thinking. Responses that were clearly the same were removed, creating a separate category. However, overlap between episodic and semantic future thinking may not always be evident by thoughts being expressed in the same words. Future research could try to establish more clearly the overlap and distinctiveness of episodic and semantic future thinking within individuals by including further questions on the items produced. This may also allow a greater analysis of the content of the items, as the present study focused on quantity of thoughts rather than quality.

One methodological limitation is worthy of comment. Piloting showed that participants were only really able to understand what was required on the other-related future thinking condition after first completing the task for themselves, and this order was adopted for the study. It was not possible for participants to do the task the other way round, so order could not be randomised. Neither was it possible for participants to do the other-related task for a known other person because of either limited knowledge if the person was not close to them or too many shared items if the person was close to them. The procedure adopted clearly had high face validity and was easy for participants to complete. However, because of the fixed order it is difficult to draw conclusions about any main effects of condition, which in any case were not the focus of the study. More importantly, it is difficult to see how a simple practice effect or priming effect could have produced the different correlations in Study 1 and the differential effects for the groups in

Study 2. It is possible, for example, that there was an order effect that operated differently for parasuicide and control participants, but that does not seem likely.

There are a number of avenues for future research, particularly addressing issues of stability and causality. Williams and colleagues have shown that fluency of problem solving (Williams, Barnhofer, Crane, & Beck, 2005) and fluency (number) of future positive future thoughts (Williams, Van der Does, Barnhofer, Crane, & Segal, in press) are both sensitive to induced mood—those with a history of suicidality or hopelessness show reduced fluency after having a negative mood induced. Longitudinal studies looking at natural changes in mood, or distance from a suicidal episode, and how those changes relate to changes in future-directed thinking would help further in understanding the stability versus reactivity of these effects. Further experimental studies, for example, manipulating future thinking and observing effects on mood, would help to establish whether there was a causal effect going from cognitions to mood, as well as from mood to cognitions.

The findings of the two studies show that personal, episodic future thinking is impaired in low well-being but other-related, semantic future thinking is not. One implication is that intervening in low well-being should be less about bringing to mind hypothetical, possible future positive outcomes and more about enhancing people's ability to think about them in a personally engaged way and increasing the perception that they can be attained.

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