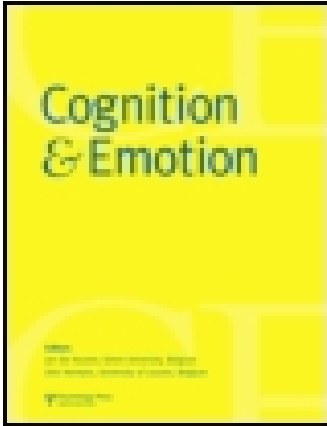


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Well-being and the anticipation of future positive experiences: The role of income, social networks, and planning ability

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The present study aims to answer two questions: (1) are expectations of future positive experiences related to well-being in the general population?; and (2) what factors (social, psychological, economic) enable people to have expectations of future positive experiences. A community sample ($N = 84$) was assessed on a measure of anticipation of future positive and negative experiences, factors that might enable positive anticipation (measures of income, social networks, planning ability, and affective capacity) and measures of subjective well-being (positive and negative affect and life satisfaction). Subjective well-being was related to having more anticipated positive experiences, which was in turn related to having a large social network, having a high number of steps in plans to achieve goals, and, more marginally, to having a high household income.

Understanding the roots of well-being has major implications both for explaining variations in the general population and for understanding the low states of well-being encountered in many clinical populations. Common to both the clinical and nonclinical literature is the idea that how someone thinks about the future is a key element of their of well-being. One major approach takes the view that people experience well-being when they are engaged in striving towards valued goals (Diener, 1984; Schmuck & Sheldon, 2001). Well-being in this context refers to subjective well-being, which is typically operationalised as high levels of positive affect, low levels of negative affect and high life satisfaction (Diener, Suh, Lucas, & Smith, 1999). Goals in the broadest sense refer to “internal representations of desired states, where states are broadly construed as outcomes, events, or processes” (Austin & Vancouver, 1996, p. 338). In practice, goals are typically measured by asking study participants to list things that

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they are working towards in their own lives, usually conceptualised as personal projects (Little, 1993) or personal strivings (Emmons, 1986). Having and progressing towards goals is related to well-being (Carver & Scheier, 1990). However, the qualities of the goals are also important, with goals chosen for reasons of value and enjoyment (Sheldon & Elliot, 1999) and goals that match the individual's underlying motivational system (Brunstein, Schultheiss, & Grassman, 1998) conferring most benefit.

The link between goals and well-being does not simply depend on the actual achievement of goals but entails a strong anticipatory element. A sense of goal progress is likely to be intrinsically rewarding, but is also likely to have the effect of increasing anticipation of the goal. This pre-goal attainment positive affect is hypothesised to be a core feature of motivated behaviour (Davidson, 1998).¹ Goals, and, in particular, goal progress, are likely to affect well-being through anticipatory affect—people feel good when they think about experiencing desirable future outcomes. A major focus of the current study is on well-being as a product of anticipatory cognitions concerning future goals.

The studies reviewed above on the relationship between goals and well-being are mainly, if not exclusively, on college samples which on average have reasonably high levels of well-being. However, there is also evidence from the other end of the emotional spectrum, that people with very low levels of well-being have disrupted future-directed thinking. Future-directed thinking tends to be measured in different ways than asking people to list goals and looking at various aspects of those goals (see MacLeod, 1999 for a review). MacLeod and colleagues developed the Future-Thinking Task in which participants are asked to generate positive responses (things in the future they are looking forward to) and negative responses (things they are not looking forward to) for different future time periods, for example, the next week, the next year, and the next 5 to 10 years. A consistent finding is that depressed and suicidal individuals are distinguished from controls by their lack of positive thoughts about the future while being no different in the number of negative thoughts they are able to generate (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.

The Future-Thinking Task clearly does not address goals in exactly the same way as the measures described earlier that ask participants for their strivings or projects, yet it is overlapping. It is broader in that it elicits a wider range of future experiences including relatively minor experiences, especially for the

¹ It is important to note that what is being talked about is anticipatory affect—what a person feels when he/she thinks about the outcome happening—rather than anticipated affect, which is how a person thinks he/she *will* feel when the outcome happens (Loewenstein, Weber, Hsee, & Welch, 2001).

near future, which nevertheless may be important contributors to well-being. It also taps into an individual's participation in ongoing life tasks or roles (Cantor & Sanderson, 1999), which may manifest itself as valued activities rather than goals *per se*. As such, the measure seems to elicit responses that conform quite well to Austin & Vancouver's (1996) broad definition of goals as internal representations of desired states rather than simply the more achievement related view of goals as projects or strivings. The first aim of this study was to bring together the different lines of research already described by seeing to what extent having things to look forward to, as assessed by the Future-Thinking Task, was related to well-being in the general population. The link between positive future thinking and well-being has been demonstrated through research on clinical populations but no study has looked at whether positive future thinking of this kind is related to well-being in the general population.

The second, and main, aim of the study was to examine factors that might underlie the ability to anticipate positive experiences in the future. Why do some people report having many things to look forward to and others do not? One answer is that some people have more resources than others. Diener and Fujita (1995) define resources as "material, social, or personal characteristics that a person possesses that he or she can use to make progress toward her or his personal goals" (p. 926). Similarly, Cantor and Sanderson (1999) suggest three classes of resources—personal, social, and material—that enable people to take part in life tasks and have future goals. Responses that participants give to the Future-Thinking Task also suggest similar categories. Some of the things people look forward to clearly rely on money (e.g., "getting my new kitchen"; "doing my round the world trip"), and some are clearly social ("seeing friends at the weekend"; "getting married next year").

In addition, many of the things people look forward to clearly rely on planning and initiating, as can be seen in the examples already given. Sheldon and Kasser (1998) point out that little research has looked at skills that enable goal progress. Planning is an example of such a skill. As with the other enabling factors outlined, there is evidence that planning is linked to well-being. Prenda and Lachman (2001) found that those who reported a general propensity to plan for the future showed high levels of subjective well-being. We therefore developed a measure of planning ability as there has been relatively little work in measuring planning, particularly planning to meet life goals. This measure was based on the Means End Problem Solving Task (Platt & Spivack, 1975) in which people are asked to generate steps to get from their current problem situation to a point where the problem is resolved. In the planning task developed for the current study, participants were asked to identify positive future goals and to generate steps that would take them from their current situation to those goals being achieved. Responses were independently coded to produce a direct cognitive performance measure of planning rather than simply a self-report measure. Finally, a basic requirement for anticipating positive

experiences is the capacity to experience pleasure. This factor might be particularly relevant in the clinical domain where anhedonia can be a problem (Sloan, Strauss, & Wisner, 2001; Snaith et al., 1995) but it seems likely that there will be variations in affective capacity in the general population, part of what Davidson (1998) calls individual differences in affective style. Therefore, as a fourth enabling factor we measured general affective capacity.

In the present study, a community sample was recruited and administered the Future-Thinking Task. The focus was on anticipation of positive future experiences but anticipation of negative experiences was also included to act partly as a comparison and also to further test the independence of negative and positive anticipation by showing that (low) negative anticipation was not linked to the same factors as (high) positive anticipation. Participants were also administered measures of the four types of enabling factors—income, social networks, planning ability, and affective capacity—along with measures of subjective well-being. We predicted in relation to the first aim of the study that number of anticipated positive experiences would correlate with subjective well-being. Second, we predicted that number of anticipated experiences would itself be predicted by the enabling factors: Individuals who were able to think of many things they were looking forward to should have high incomes, have large and good quality social networks, score highly on the measures of planning, and have high affective capacity.

METHOD

Participants and procedure

A total of 430 individuals were selected at random from a pool of over 7000 individuals aged 18 or over listed on the electoral role for the electoral division of Egham North. Egham is a small, university town just outside London. All those selected received a postal questionnaire consisting of an information sheet, a basic demographics sheet, and four questionnaires which they were asked to complete and post back. The questionnaires included the SHAPS-R, which allowed the test-retest reliability reported for this measure below to be calculated. They were also asked to indicate if they would like further information about the possibility of taking part in an interview. Of the 430 who received a letter, 131 returned the postal questionnaire completed, 87 indicated they would like further information about the interview, and 85 of these agreed, after a telephone conversation with the researcher, to meet for the interview. The overall response rate for taking part in the interview was 20%. Although 85 agreed to meet for the interview, this reduced to 84 as one participant was excluded from the study on the basis that she had a young child with her throughout the interview and was unable to complete all the measures. Interviews took place either in the participant's own home or in the Department of Psychology, Royal Holloway, University of London. The sample size of 84 gave

a power of .80 at an alpha level of .05 to detect a medium effect size using correlations and multiple regression with up to four predictor variables (Cohen, 1992).

The final sample comprised 40 men and 44 women, ranging in age from 18 years to 88 years ($M = 48$, $SD = 15.7$). Apart from being aged 18 or over there were no exclusion criteria, in order to maximise the generalisability of the findings. Participants were paid a small honorarium for taking part. Table 1 shows the demographic characteristics of the sample compared to the population for which it was drawn using the most recent census data available. In broad, demographic terms the study sample was representative of the population from which it was drawn.

Measures

Measures were completed in the order in which they are described below.

Control task (FAS). This is a standard task providing a general measure of verbal fluency (Lezak, 1995) that can act as a control for the general performance element of the Future-Thinking Task. 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 (FTT). 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). For each of the three time periods and in each of the two conditions,

TABLE 1
Demographic characteristics of the study sample ($N = 84$) and the population from which it was drawn ($N = 7409$)

<i>Variable</i>	<i>Male/Female (%)</i>	<i>Ethnicity white (%)</i>	<i>Mean age (years)</i>	<i>Married (%)</i>	<i>Retired (%)</i>	<i>Employed (%)</i>
Study	48/52	98	48	64	20	63
Population	49/51	98	46	57	19	57

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. Likewise, the score for total negative anticipation is the sum of scores for each of the time periods within the negative condition. Presentation of positive and negative conditions is counterbalanced. The Appendix shows some examples of responses to the positive condition from participants in the present study.

Sociability scale (Cheek & Buss, 1981). This brief 5-item measure of sociability was initially developed to establish the independence of the shyness and sociability constructs, but has shown adequate internal consistency ($\alpha = 0.70$) to warrant its use as a short measure of sociability (Cheek & Buss, 1981). The items included tap the “need to be with people” aspects of sociability. Each item is rated on a 5-point scale, where 0 = “extremely uncharacteristic” and 4 = “extremely characteristic”. Piloting for the present study showed that many individuals found the terms “characteristic” and “uncharacteristic” difficult to understand. Therefore “like me” and “unlike me” were used to anchor the scales. This slightly modified version used in the present study showed good internal reliability ($\alpha = .73$). The score for sociability is the sum of all five responses.

The revised SHAPS (SHAPS—R). The revised SHAPS is based on the Snaith Hamilton Pleasure Scale (SHAPS; Snaith et al., 1995), with a number of revisions made for this study. Like the original SHAPS, it is a 14-item scale that assesses the degree to which various different activities or situations give individuals pleasure in the domains of social interaction, food and drink, sensory experiences, achievement, and pastimes. The original SHAPS was designed primarily as a diagnostic tool to discriminate “normal” from “abnormal” hedonic tone and uses a categorical scoring scheme for each item, making it insensitive to variations in the general population. For example, data from Snaith et al. (1995) indicated that out of a sample of 82 people from the general population, 68 (82%) scored maximum. Therefore, in the present study, the response format was modified to a 7-point Likert scale, where 1 = *not very enjoyable* and 7 = *extremely enjoyable*. A second small change made to the SHAPS, was to remove “in the last few days” from the instructions because we were interested in measuring trait affective capacity rather than present state. The score for the SHAPS-R is the sum of all 14 items. In the present study, the SHAPS-R showed good internal-reliability ($\alpha = .86$) and good test-retest reliability over a 2–4 week period ($r = .85$).

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item scale that consists of a list of 20 affect adjectives, for which the participant is asked to indicate the extent to which “they feel this way generally”, by circling one number from 1–5, where 1 = “very slightly or not at all” and 5 = “extremely”. The scale yields two subscales of positive affect (PA) and negative affect (NA), which have been found to be largely uncorrelated and show good internal and test-retest reliability (Watson et al., 1988).

Social opportunity. Participants’ social networks were assessed within an Exchange Approach (van der Poel, 1993), which assesses a network in terms of its potential for rewarding exchanges. The names of individuals within the network were elicited using a 6-item exchange questionnaire. The first five questions were taken from van der Poel (1993) and cover people that the participant could ask for help from, ask for advice, borrow things from, go out with occasionally and socialise with regularly. The sixth question—“Is there anyone else that you haven’t already mentioned with whom you have contact? This contact can be enjoyable, useful or helpful. For example, there might be other people whom you have contact with over the phone, through letters or email, or only meet with occasionally”—was added for the present study as piloting showed that it often elicited people who had been overlooked by the five standard questions.

Each question is presented verbally to the participant, who can name up to five individuals in each case, with individuals being counted only once. The score for social network size is the number of different people elicited through the six questions (score range for network size is 0–30). In addition to size, two other aspects of networks were measured. Enjoyment of contact and usefulness of contact were measured through asking people to rate each person elicited using a 10-point Likert scale anchored by 1 = *not very enjoyable* and 10 = *extremely enjoyable*, and 1 = *not very useful* and 10 = *very useful*, respectively. After eliciting the names, participants were given a printed copy of the Likert scale (enjoyment first, then usefulness) and asked to say aloud the rating for each name, as each name was read to them. The scores used were mean enjoyment score and mean usefulness score, in each case derived by dividing the total score by the network size, thus creating measures of the quality of the network that were independent of size.

Personal income and household income. Income was measured using questions from the Income Questionnaire section of the 1998–99 Family Expenditure Survey (Office of National Statistics, 1999). The measures asks the participants to estimate their personal income and household income for the year, using guidelines outline what sources of income need to be included in a calculation of income (e.g., salary before tax, income from self-employment,

social security benefits, investments, occupational and state pensions, allowances, and other income, such as renting property). Personal income was measured using a list of 30 income bands, where 1 = “£59,000 (\$84,700) and above” and 30 = “£2,999 (\$4,250) and below” (each band decreases by £2,000). Household income was measured using a list of 22 income bands, where 1 = “£110,000 (\$156,200) and above” and 22 = “£9,999 (\$14,200) and below” (in this case each band decreases by £5,000). The participant ticks one box for each band to indicate where their income lies. The score for personal income and household income is the number of the band that is ticked in each case.

The Temporal Satisfaction with Life Scale (TSWLS; Pavot, Diener, & Suh, 1998). The TSWLS was developed from the original Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). Just like the SWLS, it measures the cognitive component of subjective well being (SWB), but separates past, current and future satisfaction. The TSWLS consists of 15 items, with 5 items each from the past, present, and the future time frames. Responses are measured using a 7-point Likert-type scale, where 1 = *strongly disagree* and 7 = *strongly agree*. The internal reliability for the TSWLS scale is high ($\alpha = .91$) and is also high for each individual time period (Pavot et al., 1998). All items are positively keyed so that the score is simply the sum of all responses, where a higher score indicates greater life satisfaction (score range is 15–105). It is also possible to score each time frame individually (score range for each of the time frames—past, current, and future is 5–35). In the present study the three time frames were highly intercorrelated and showed very similar correlations with other variables so only the total was used.

Planning Control Task. This task is designed to measure written fluency and to act as a direct performance control for the planning task described below. Participants were asked to identify a journey that they made frequently and to write a description of all the steps in the journey. The written instructions follow the same format as the planning task: “Imagine that you are at the beginning of the journey and want to reach that destination. Then, write down as much as you can about the steps that you would need to take and the things that you would need to do in order to get there. You have a couple of minutes”. The number of words written was recorded.

Planning Task. This procedure was developed for the present study to measure planning skills. The task involves two stages. First, the participants are given verbal instructions to generate four goals that they have for the “foreseeable future”, one from each of four categories: personal relationships, money and finance, health and fitness, and leisure and recreation. Order of presentation of the four goals is randomised. These categories were chosen on the basis that they represented very broad life domains in which most people

would be able to generate a goal. Next, participants were re-presented with their goals written at the top of a separate page preceded by written instructions: “Listed below are each of the goals that you have just mentioned. Try to imagine how you would get to each goal from where you are at present. Then write down as much as you can about the steps that you would need to take and the things that you would need to do in order to get there. You have a couple of minutes for each goal”. This time limit is, however, only a guide to participants and they are allowed to spend as long as they want on the task.

A number of measures were derived from the planning task. The *number of steps* represents the number of discrete steps or idea units within a response. This was usually straightforward as many participants wrote each step on a different line. In other cases, the researcher had to separate a more continuous prose passage into discrete steps or units. Responses that were not steps, such as restating a goal or commenting on a goal, were ignored. The score for number of steps is the mean number of steps across the four goals. *Plan specificity* is a score derived from rating each step in each plan for specificity on a four-point rating scale using a coding scheme developed for this study (the full coding scheme is available from the authors). The scheme uses rules about whether the action specified was specific to the domain (goal) in question, the amount of information given, and whether a plan is easily further divided into subgoals. The following give examples of specificity scores for a plan step in the case of the goal “to lose weight”—to take control” (0); to “eat more sensibly” (1); “to eat more fruit and vegetables and less fat” (2); “to bring two pieces of fruit to work every day” (3). A second, blind rater showed good agreement with the first rater’s scoring on a random sample of 10% of responses ($r = .84$). The specificity score was the mean specificity of plans score (score range is 0–3). *Plan effectiveness* was an observer-rated judgement of how likely the goal was to be achieved assuming that the participant’s stated plans were to be carried out. Effectiveness of plans was rated using a 4-point scale, where 0 = *unlikely*, 1 = *fairly likely*, 2 = *very likely*, and 3 = *extremely likely*. The judgement of likelihood is achieved by comparing the plan to a general schema of what all the possible ways are of achieving the particular goal. A second blind rater showed good agreement with the first rater’s scoring on a random sample of 10% of responses ($r = .89$). The mean effectiveness rating is the ratings averaged across the plans for the four goals (score range is 0–3).

A number of the variables were significantly skewed and were therefore transformed to approximate normal distributions following the recommendations of Tabachnik and Fidell (1996). The following variables were transformed: journey words (square root); total positive FTT score (square root); total negative FTT score (square root); personal income (square root); household income (square root); and NA score (LOG10). The PA score was negatively skewed, so was reflected, transformed (square root), and finally reflected back in order to maintain the original directionality of scoring. Adjusted planning

measures were computed by regressing planning steps, effectiveness and specificity on number of words (sqrt) produced in the planning control task and saving the residuals in each case. This produced a measure of planning that was not influenced by general written fluency as measured by a similar task. Similarly, adjusted positive and negative future thinking scores were computed by regressing the transformed positive and negative future thinking scores on FAS scores and saving the residuals in each case. All these residual scores produced results that were virtually indistinguishable in terms of pattern of significance from those using the original planning scores and future thinking scores but for completeness the analyses presented are based on the adjusted variables. Data were available for all cases for all variables except for household income and personal income, where three participants did not give their income levels and the planning measures where one (different) participant did not complete the task as directed. In analyses involving these variables, those participants were excluded.

RESULTS

Descriptive statistics on the variables are shown below. Where a variable was transformed the transformed scores were used in the analyses, though for comparability with other studies, the original values are shown first followed by the transformed values. Residual scores are not shown as the means all approximated zero. The means and standard deviations were: FAS ($M = 12.90$, $SD = 3.44$); number of words in journey ($M = 74.82$, $SD = 38.33$; $M = 8.40$, $SD = 2.07$); total positive FTT score ($M = 15.64$, $SD = 5.16$; $M = 3.90$, $SD = 0.66$); Total negative FTT score ($M = 5.37$, $SD = 3.49$; $M = 2.17$, $SD = 0.87$); personal income ($M = 12.06$, $SD = 8.35$; $M = 3.23$, $SD = 1.28$); household income ($M = 9.16$, $SD = 5.68$; $M = 2.87$, $SD = 0.87$); network size ($M = 15.42$, $SD = 4.97$); mean network enjoyment ($M = 7.64$, $SD = 0.98$); mean network usefulness ($M = 7.11$, $SD = 1.21$); sociability ($M = 14.35$, $SD = 3.14$); SHAPS-R ($M = 78.35$, $SD = 9.38$); PA ($M = 37.42$, $SD = 6.12$; $M = -3.59$, $SD = 0.83$), NA ($M = 19.81$, $SD = 7.88$; $M = 1.26$, $SD = 0.17$); TSWLS ($M = 66.12$, $SD = 16.10$); mean number of steps in plan ($M = 3.18$, $SD = 1.15$); mean effectiveness of plans ($M = 1.54$, $SD = 0.57$); and mean specificity of plans ($M = 1.65$, $SD = 0.39$).

Future thinking and well-being

The correlations of positive and negative future thinking with the measures of well-being and the intercorrelations among the well-being measures are shown in Table 2. Having more positive thoughts about the future was associated with high PA and life satisfaction but not with low NA. In contrast to positive future thinking, having more negative thoughts about the future was associated with high NA and low life satisfaction but not with PA. The intercorrelations among

TABLE 2
Correlations of positive future thinking, negative future thinking,
and the subjective well-being measures

	<i>PA</i>	<i>NA</i>	<i>TSWLS</i>	<i>NegFT</i>
PosFT	.29**	-.10	.31*	.15
PA		-.20	.40***	-.16
NA			-.31**	.31**
TSWLS				-.25*

PosFT = Total positive future thinking score; NegFT = Total negative future thinking score; PA = positive affect; NA = negative affect; TSWLS = Temporal Satisfaction with Life Scale. * $p < .05$; ** $p < .01$; *** $p < .001$.

the well-being measures were generally what would be expected: both PA and NA correlated in the expected directions with TSWLS scores.

Enabling factors and future-directed thinking

Correlating future thinking with the income measures revealed a significant correlation of positive future thinking with household income, $r(79) = .37, p < .001$, but not with personal income, $r(79) = .12, n.s.$. This finding probably reflects the composition of the sample—most were married or cohabiting therefore would be likely to have shared incomes. Household and personal income did show a modest correlation with each other, $r(79) = .25, p < .05$. The SHAPS-R did not correlate significantly with positive future thinking, $r(82) = .03$.

The correlation between the measures of social enabling factors and future-directed thinking are shown in Table 3. For comparison, correlations with negative future thinking are also shown and will be discussed later. Positive

TABLE 3
Correlations of positive and negative future thinking with social enabling factors

	<i>Network size</i>	<i>Mean enjoyment</i>	<i>Mean usefulness</i>	<i>Sociability</i>	<i>NegFT</i>
PosFT	.44**	-.02	-.01	.28*	.15
Network size		.08	-.02	.27*	-.03
Mean enjoyment			.67***	.06	-.26*
Mean usefulness				.22	-.17
Sociability					.19

PosFT = Total positive future thinking score; NegFT = Total negative future thinking score. * $p < .05$; ** $p < .01$; *** $p < .001$.

future thinking correlated highly with network size and moderately with sociability. When the correlation between network size and sociability was taken account of by partialling each out of the other's correlation with positive future thinking, network size still showed a highly significant correlation with positive future thinking, $r(81) = .39, p < .001$, although sociability did not, $r(81) = .18, n.s.$. Mean enjoyability or helpfulness of social interactions did not correlate with positive future thinking.

The correlations between the various planning measures and positive and negative future thinking are shown in Table 4. Number of steps in plans and the independently rated effectiveness of plans correlated highly with positive future thinking, though the specificity of plans did not.

The pattern of correlations for negative future thinking were on the whole quite different from those for positive future thinking. Neither household income, $r(79) = .20, n.s.$, nor personal income, $r(79) = -.04, n.s.$, correlated significantly with negative future thinking. In contrast to positive future thinking, SHAPS-R showed a strong inverse correlation with negative future thinking, $r(82) = -.37, p < .001$: Those who took most pleasure in everyday things were least worried or preoccupied with future negative experiences. Of the social enabling factors, as shown in Table 2, negative future thinking correlated only with mean enjoyment, with those participants who derived most enjoyment from interactions with people in their networks showing fewest things they were worried about or not looking forward to. Negative future thinking correlated with number of planning steps—those with many steps had more worries and things they were not looking forward to—but not with rated effectiveness.

To summarise, those who gave more things that they were looking forward to had larger social networks, a larger household income, gave more steps in planning towards their goals, and received higher ratings on the effectiveness of their plans. Those who had more things they were worried about or not looking forward to said they derived less enjoyment from their network, derived less enjoyment from things in general, and gave more steps in their plans.

TABLE 4
Correlations of positive and negative future thinking with measures of planning

	<i>Number of steps</i>	<i>Plan effectiveness</i>	<i>Plan specificity</i>	<i>NegFT</i>
PosFT	.38***	.31**	-.07	.15
Number of steps		.72***	.01	.24*
Plan effectiveness			.15	-.11
Plan specificity				.11

PosFT = Total positive future thinking score; NegFT = Total negative future thinking score.
* $p < .05$; ** $p < .01$; *** $p < .001$.

To further address the second aim of the study, a standard multiple regression was carried out with positive future thinking as the dependent variable and household income, network size, planning steps, and planning effectiveness as predictor variables. The aim was to see what the combined predictive power of these variables was and also to see whether their relationships with positive future thinking were independent of each other. The model with all four predictor variables accounted for a significant amount of variance in positive future thinking, adjusted $R^2 = .30$, $F(4, 76) = 9.3$, $p < .001$). In the final equation, network size, $t(72) = 3.3$, $p < .01$, and planning steps, $t(72) = 2.7$, $p < .01$, each made significant unique contributions. Household income, $t(72) = 1.7$, $p = .09$, showed a trend though planning effectiveness showed no evidence of a significant, unique relationship to positive future thinking, $t(72) = -1.2$, n.s.).

DISCUSSION

As predicted, subjective well-being correlated with positive future thinking thus extending findings from the clinical literature to the general population. In relation to the second, and main, aim of the study, a number of enabling factors were related to positive future thinking and further analysis showed that size of social network and number of steps in plans to achieve goals each had independent relationships with positive future thinking. Household income did not have a significant unique contribution but showed a trend towards significance and so it would be premature to dismiss it as a relevant factor. The other social, economic, and planning variables either did not relate to positive future thinking or did not contribute once the others had been controlled for. Affective capacity showed no relationship to positive future thinking.

Social network size was a clear predictor of positive future thinking. In many ways, this is no surprise as many of the things that people look forward to involve other people. Cohen and Wills (1985) argued that social networks produce a general effect on well-being because “large social networks provide persons with regular positive experiences and a set of stable, socially rewarded roles in the community” (p. 311). Following the main theme of this paper, a range of social roles and contacts will provide extensive opportunity for anticipating positive experiences. Consistent with this view that network size enhances well-being in general, we found that network size rather than quality related to positive future thinking. Cohen and Wills (1985) argue that embeddedness in a network is beneficial to well-being in an ongoing way but will not necessarily help when faced with specific stressors. In this latter case, supports that specifically compensate for the stressor or a single, close confidant will provide more effective buffering against stress than would a large range of social contacts. Our findings are also partially consistent with this point as negative future thinking was inversely related to the quality of participants’ social contacts in terms of average enjoyableness but not to the size of the

network. Therefore, we can speculatively extend the main effect versus buffering view of social support to argue that the main effect of integration into a large social network benefits positive future thinking and ongoing levels of well-being whereas having close, good quality contacts reduces negative future thinking and protects well-being in the face of stress. However, this latter point would have been more convincing if the correlation was with helpfulness rather than enjoyableness.

Perhaps the most novel and interesting aspect of the current study was looking at planning skills and how they relate to positive anticipation. There has been relatively little research on planning (see Friedman & Scholnick, 1997 for an exception). Planning is a skill that is very likely to facilitate goal progress and achievement. In relation to particular measures, it is not clear why number of steps in planning rather than plan specificity or rated effectiveness emerged as the strongest predictor of positive future thinking. This does, however, fit with the problem-solving literature where the number of means or steps is used as an indicator of good problem solving (Platt & Spivack, 1975). Clearly, much work remains to be done in looking at planning and its relationship to well-being, for example, in looking at the nature of plans and at why some people are better planners than others.

Income was not strongly related to positive future thinking. This is consistent with the general finding that income correlates only modestly with well-being, and mainly at lower income levels (Diener et al., 1999). It is not clear why affective capacity was not linked to positive future thinking. It is unlikely to be an issue of statistical power as although the sample size was not large it was adequate to detect a medium effect size and, moreover the correlation was close to zero. Possibly, the measure we used to measure affective capacity was not sensitive to the construct that we were trying to assess, though we did modify it to try to increase its sensitivity for this population. A previous study by MacLeod and Salaminiou (2001) using a different measure of affective capacity found that it could not account for differences in positive future thinking between depressed and nondepressed participants. Therefore, the evidence to date suggests that individual differences in affective capacity are not that important in explaining differences in positive future thinking. Affective capacity was inversely related to negative future thinking, however, as there is no clear reason why this should be the case and it was not predicted we will not try to elaborate on this finding.

The Future-Thinking Task used in the present study elicits a broad range of anticipation of future outcomes that are not necessarily goals in the way that the term is normally used to describe strivings and projects. Measuring future thinking in this way allows a broader assessment of how a person's current subjective well-being is grounded in their anticipation of a wide range of self-defined, positive future experiences. This allows for the fact that some people may be less goal-directed than others but that nevertheless their current sense of

well-being may be related to anticipation of future positive experiences. However, what is anticipated may be experiences of enjoyment or pleasure rather than experiences of achieving goals. It is likely that, for most people, well-being depends on both having and anticipating the achievement of personally meaningful goals and projects, and also being able to anticipate and enjoy pleasurable experiences, some of which may be manifestations of underlying goals, some of which will reflect embeddedness in life tasks and social roles (Cantor & Sanderson, 1999), and others which will simply reflect pleasure and enjoyment *per se*.

The present study adopted the concept of well-being commonly used in the literature but, consistent with the suggestion by Diener et al. (1999), treated them separately. The differential findings for positive affect and negative affect support the idea that it is useful to look at these aspects of well-being separately. The fact that positive future thinking correlated with positive affect and not negative affect, whereas negative future thinking correlated with negative affect, but not positive affect further reinforces the independence of positive and negative future thinking.

There were a number of limitations to the study. The foremost of these is the cross-sectional and correlational nature of the data. We have argued for a particular model although there are clearly alternatives. Subjective well-being, at least its positive affect component, could lead to better planning by broadening attention (Isen, 1999), and could also enhance other enabling factors. The enabling factors may themselves be causally linked: Being a good planner may lead to a bigger social network and a higher income, to the extent that plans are socially constructed then a larger network could lead to bigger plans, and so on. The model outlined here is conceptually coherent but it is likely that many of these variables are reciprocally related and laboratory-based experimental research or longitudinal naturalistic research could usefully try to disentangle the various causal possibilities. The study had a fairly low response rate to recruitment. However, we were able to demonstrate basic demographic comparability of participants to the population from which they were recruited and the sample does represent a more diverse population than the almost exclusively student-based studies on which the goals literature is based. Nevertheless, it is still possible that those who took part were different in some ways from those who did not, for example, in being more psychologically minded. Future research could also use more refined measures of goals. For example, we did not look at the self-concordance of goals or their importance in terms of underlying motive dispositions nor did we did match particular enabling factors to particular domains of positive anticipation.

Diener (2000) has pointed out that previous research has focused on who is happy, whereas more recent research is beginning to try to understand the processes underlying subjective well-being. The present study contributes to that endeavour by showing that anticipation of positive future experiences is a major

facet of current subjective well-being and that this anticipation is linked to cognitive, social, and economic factors. The study brings together findings from the clinical and nonclinical literature and suggests that the same processes might underlie the full spectrum of well-being, thus contributing to understanding both variations in well-being in the general population and the states of low well-being found in many clinical populations.

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APPENDIX

Examples of Future-Thinking Task responses: Positive condition

Next week

Walking the dog
Relaxing
Playing squash
Weekend with my children
A glass of wine tonight
Taking my daughter to drama lessons
Visit to the science museum
Rehearsal for the play on Saturday
Reading my book
Having my tea
Rugby match
Sleeping

Next year

Wedding in April
Seeing my grandson
Summer
Travelling more
Holidays
Concentrating on my research
Doing my garden
Finishing the house
Holidays with the family
Moving in with friends in London
Going to Spain
Training to do another job
Being fit
Having a conservatory built
Gardening in the summer

Next five to ten years

Retirement
Seeing my children happy
Going to the sea
Moving to another area
Seeing my children growing up
Having more time
Spending time with my wife
Visit to Pakistan—seeing old schoolfriends
Finding a nice man to settle down with
New lifestyle
Teaching English as a foreign language
Things staying as they are
