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HAPPINESS IN EVERYDAY LIFE: THE USES OF EXPERIENCE SAMPLING*

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ABSTRACT. This paper uses the Experience Sampling Method data drawn from a national sample of American youth. It examines the proximal environmental factors as well as behaviors and habits that correlate to personal happiness. Momentary-level scores show that reported happiness varies significantly both by day of week and time of day. Furthermore, particular activities are associated with varying degrees of happiness. School activities rate below average scores in happiness, while social, active and passive leisure activities are above average. Particular companions also correlate to differing level of happiness. Being alone rates the lowest levels of happiness, while being with friend corresponds to the highest. Person-level averages of happiness suggest that both higher social class and age correlate with lower levels of happiness, while gender and race do not. Paradoxically, youth who spend more time in school and social activities are happier than those who spend less. Unexpectedly, students who spend more time pleasure reading report lower levels of happiness. Finally, feeling good about the self, excited, proud, sociable, active as well as being in the conditions for flow experience are the strongest predictors of trait happiness.

KEY WORDS: experience sampling, happiness, usual daily activities

Current understanding of human happiness points at five major effects on this emotion. These are, moving from those most impervious to change to those that are most under personal control: genetic determinants, macro-social conditions, chance events, proximal environment and personality. It is not unlikely that, as behavioral geneticists insist, a “set level” coded in our chromosomes accounts for perhaps as much as half of the variance in self-reported happiness (Lykken and Tellegen, 1996; Tellegen et al., 1988). These effects are probably mediated by temperamental traits like extraversion, which are partly genetically determined and which are in turn linked to happiness (Myers, 1993). Cross-national comparisons suggest that macro-social conditions such as extreme poverty, war and social injustice are all obstacles to happiness (Inglehart and Klingemann, 2000; Veenhoven, 1995). Chance events like personal tragedies, illness, or sudden strokes of good fortune may drastically affect the level of happiness, but apparently these

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effects do not last long (Brickman et al., 1978; Diener, 2000). One might include under the heading of the proximal environment the social class, community, family and economic situation – in other words, those factors in the immediate surroundings that may have an impact on a person's well-being. And finally, habits and coping behaviors developed by the individual will have an important effect. Hope, optimism and the ability to experience flow can be learned and thus moderate one's level of happiness (Csikszentmihalyi, 1997; Seligman, 2002).

In this paper, we present a method that allows investigators to study the impact of momentary changes in the environment on people's happiness levels, as well as its more lasting, trait-like correlates. Research on happiness generally considers this emotion to be a personal trait. The overall happiness level of individuals is measured by a survey or questionnaire, and then "happy" people – those who score higher on a one-time response scale – are contrasted with less happy ones. Whatever distinguishes the two groups is then assumed to be a condition affecting happiness. This perspective is a logical outcome of the methods used, namely, one-time measures. If a person's happiness level is measured only once, it is by definition impossible to detect intra-individual variations. Yet, we know quite well that emotional states, including happiness, are quite volatile and responsive to environmental conditions.

Of course both common sense and psychological research suggests that when positive events happen in a person's life, happiness increases. For instance Schwartz and Strack (1999) have shown that even such trivial events as one's home team winning a soccer match, or the information that the weather in one's hometown is better than the weather in surrounding areas, will raise happiness levels. However, they warn that: ". . . subjective well-being cannot be predicted on the basis of objective circumstances, unless one takes the construal process into account" (p. 61). In other words, the impact of external events on happiness is mediated by the person's system of values and cognitive interpretive structures.

It is to detect variations in emotional states over time that the Experience Sampling Method (ESM) was developed. This method relies on subjects' responses to an electronic pager that signals at random times during the waking hours of the day, yielding up to fifty measures of happiness at specific moments during an average week. Each time the pager signals, the respondents rate their experiential states, including their levels of happiness (e.g. Csikszentmihalyi et al.,

1977; Kubey et al., 1996; Csikszentmihalyi and Schneider, 2001; a handbook for using the ESM is in preparation, see Hektner, in press). This method not only accounts for momentary states, but can also yield trait-like measure by adding up for each person the separate momentary responses.

Daniel Kahneman (1999) has described this approach as measuring “point-instant utility”, and argued for its theoretical importance: “An assessment of a person’s objective happiness over a period of time can be derived from a dense record of the quality of experience at each point” (p. 3).

Thus repeated measures taken over a representative segment of a person’s life can be used in two ways: (a) as indicators of momentary happiness, which can help us understand the effect of immediate environmental circumstances; and (b) as personal traits derived from aggregating the repeated responses over a week’s time, to derive a trait-like measure of personal happiness.

The first comparison of state-like and trait-like characteristics of subjective experience using the ESM was a doctoral dissertation by Ronald Graef (1978). In that work Graef found that while all the emotions were more trait-determined than state-determined, this was particularly true of happiness. In other words, a person’s average level of happiness explained more of the variance in his or her responses over the week than was explained by what that person was doing, where he or she was, or whom he or she was with. This “set level” (cf. Tellegen et al., 1988) explained about twice the variance in happiness compared to other mood states. Longitudinal studies suggest a somewhat different conclusion. In a 2-year follow-up of 455 high school students, the average ESM happiness scores correlated 0.55, more or less at the same level as other mood variables. But a 4-year follow-up of a subset of 187 of these students showed only a correlation of 0.22 for happiness, while r ’s for all the other variables ranged from 0.34 (being in control) to 0.56 (being relaxed), suggesting that self-reported happiness is less stable than other dimensions of experience (Moneta et al., 2001; Patton, 1998; Hektner, in press).

In any case, there is obviously a great deal of variance unexplained by a “set level” of happiness. In this paper we are going to use ESM data on a group of over 800 adolescents to explicate the contributions of some of the momentary conditions on intra-individual reports of happiness, and then look from a trait-like perspective at how demographic variables and patterns of behavior relate to over-all levels of happiness.

METHOD

The Participants

The participants of this study are primary school students from the Alfred P. Sloan Study of Youth and Social Development, a national multi-year study involving 6th, 8th, 10th and 12th graders from 33 elementary and secondary schools from 12 communities across the country. These sites were chosen to create a nationally-representative sample based on the variation in labor force composition and participation, ethnicity, urbanicity, geographic location, and student ability (see Csikszentmihalyi and Schneider, 2000 for a fuller description). The 828 students included here are part of a focal group of 1215 youth. The group here represents those who provided the minimum amount of Experience Sampling Data and include 342 males (41.3%) and 486 females (58.7%), 491 Whites (59.3%), 54 Asians (6.5%), 131 Latinos (15.8%), 145 African Americans (17.5%) and a small number (7) of Native Americans (0.8%). Two-hundred and thirty-three, 6th graders represented 28.1% of the sample, while the remainder were 236 Eighth graders (28.5%), 196 Tenth graders (23.7%) and 163 Twelfth graders (19.7%). Social Class was measured on the community-level (rather than through household income) and consisted of 118 students (14.4%) from Poor communities, 133 (16.2%) from Working, 271 (33%) from Middle, 212 (25.8%) from Upper Middle and 87 (10.6%) Upper classes.

Measures

Measures of subjective experience and time use are drawn from the ESM, where each participant was given a programmable wristwatch set to signal at random moments eight times a day from 7:30 am to 10:30 pm for one week. Upon hearing the signal, participants completed a form containing open-ended questions about what they were doing at that moment as well as multiple-choice items regarding whom they were with and close-ended scales addressing a wide range of feelings and conditions associated with that moment. The data included here are from those students who completed at least 15 responses over the course of the week.

The open-ended items about the student's current activity were coded into several dozen specific categories, that can also be converted into much more generalized groupings such as School (eg. studying, listening to lecture), Active Leisure (playing games, sports), Passive Leisure

(watching tv, listening to music), Maintenance (grooming, eating, transportation) and Work activities (after school jobs). In addition, two variables used for assessing the activity's conditions for flow experiences are (1) the amount to which they found the current activity Challenging (a 1–9 scale, where 1 is the lowest and 9 the highest value) and (2) the student's level of Skill in the activity (using the same 1–9 scheme).

Mood variables include a 1–7 scale (1 being the most negative and 7, the most positive value) asking the student if they felt Happy (vs. Sad), Strong (vs. Weak), Proud (vs. Ashamed), Sociable (vs. Lonely), Excited (vs. Bored), Active (vs. Passive) and a 1–10 scale (where 1 is the most negative and 10, the most positive) asking “Did you feel good about yourself?”. These variables can be used to refer to specific moments in time, for example what is the level of happiness when watching television *versus* doing sports? Furthermore, an individual's total responses can also be combined to form a Person-level variable. Such variables can be used to compare people who rank happier than others overall. A third way these variables can be used is to combine the contextual and the personal. For example, using happiness as referent, a Person-Level contextual variable tells the amount of happiness a particular individual experiences in a specific activity.

Momentary Changes in Happiness

Days of the Week

There is a widely held belief that people are more sad on certain days of the week than on others. “Blue Mondays” in particular are held to be depressing. In this sample variation in happiness (using “z” scores calibrated on individual means) was very slight, although significant. An ANOVA produced an F value of 3.4 ($p < 0.002$). The lowest happiness was reported on Sundays, and each day afterwards happiness increased slightly, reaching its peak on Saturdays (see Figure 1).

Post-hoc Bonferroni tests indicated that respondents were significantly happier on Saturdays than they were on Mondays, Tuesdays and Wednesdays (Sunday responses were fewer and had a greater variance in happiness, thus yielded no significant differences).

Clearly, the social structure of time has an impact on happiness: The early part of the weekend, with its freedom from work or school, is experienced as liberating. The effect is probably greater on adults, for whom the working week is presumably even more constraining than it is for teenagers.

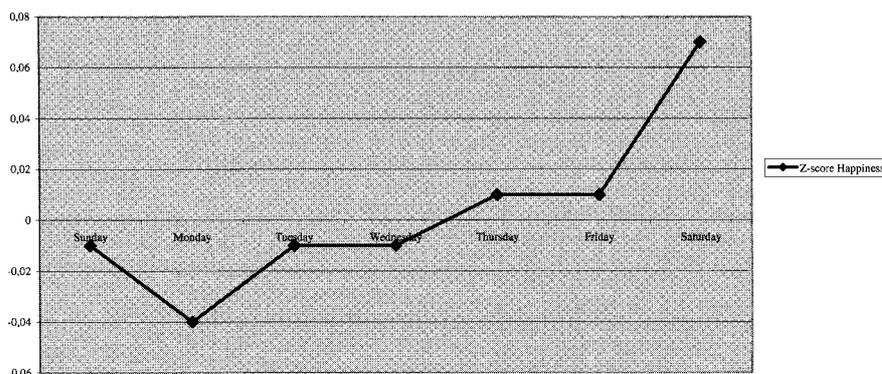


Figure 1. Happiness (beep-level z-score) by day of week.

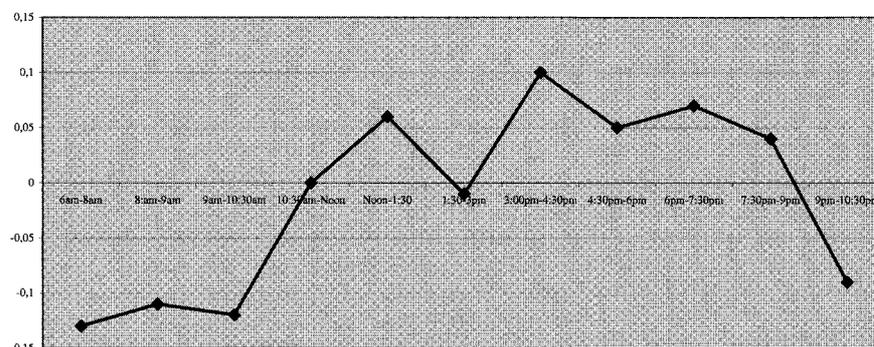


Figure 2. Happiness (beep-level z-score) throughout the weekday.

Times of Day

During the weekdays, time is structured by work or school requirements according to a circadian pattern. The first part of the day, spent at work or school, tends to be less happy, except for a peak at lunch-time. There is a dip after lunch, followed by higher reports of happiness in the afternoon when one is again free (see Figure 2).

If we contrast afternoon reports with those obtained before noon, the difference in happiness is striking ($F = 56.5$, $p < 0.00001$).

Activities

What one happens to be doing at the moment of the signal has an even more specific effect on happiness. There are ten main activities that teenagers do during the week, each taking up 2% or more of their waking time. For seven of these ten, the average level of happiness is

TABLE I
Happiness (aggregated Person-Level z -score) by top ten most frequent activities*

	Happy (z -score)	T -value	$P <$	N
TV	0.03	1.24	NS	666
Talking with Friends	0.35	9.87	0.000	325
Eating a Meal	0.19	5.78	0.000	524
Unspecified Homework	-0.30	-8.21	0.000	409
Individual Work	-0.11	-2.99	0.003	358
Listening to Lecture	-0.21	-5.36	0.000	381
Chores	-0.21	-4.44	0.000	343
Fun Reading/Writing	-0.01	-0.14	NS	324
Mathematics	-0.25	-5.27	0.000	327
Talking with Family	-0.03	-0.53	NS	281

*Activities representing at least 2% of time during the week (1% is roughly equal to 1 h)

significantly higher or lower than it is on the average (see Table I). The highest level of happiness is reported when talking with friends (Mean $z = 0.35$, $t = 9.87$, $p < 0.00001$), and the lowest when doing school-related homework (Mean $z = -0.30$, $t = -8.21$, $p < 0.00001$).

Another way to observe the effects of activities is by combining them into six major categories, which together account for 21,631 responses, or 93% of the total. Four of the six categories are significantly different from the average ($p < 0.00001$). Whenever students are involved with School-related activities, their happiness level is below average (Mean $z = -0.19$); when Socializing with friends, when involved in Active Leisure, or in Passive Leisure it is above average (Mean $z = 0.28$, 0.19 and 0.11 , respectively). Some of the happiest experiences reported in the Active Leisure category are Sports (Mean $z = 0.50$), Music ($z = 0.29$) and visual Art ($z = 0.27$). The other two major categories, which are indistinguishable from the average in terms of happiness, are Working and Maintenance activities such as doing chores, eating, dressing, and so on.

Companions

Who one happens to be with companions, it also impacts significantly on the level of reported happiness. In terms of companionship, youth experience the lowest levels of happiness when they are Alone (Mean $z = -0.12$, $p < 0.0001$), with Teachers (Mean $z = -0.09$,

$p < 0.0001$), and with Classmates (Mean $z = -0.07$, $p < 0.0001$) while being with friends corresponds to the highest level (Mean $z = 0.21$, $p < 0.0001$). Being with Parents is at the average for happiness, which is lower than being with a Sibling (Mean $z = 0.03$, $p < 0.016$). Spending time with a Relative, however, is associated with more happiness (Mean $z = 0.09$, $p < 0.002$) than either of these two familial groups.

Person-Level Correlates of Happiness

The analysis thus far focused on how happiness is experienced at the moment – how situational context relates to shifting levels of happiness within the individual. The ESM data can be also analyzed at the person level, making it possible to answer the question, what differentiates young people who on the average report higher levels of happiness from those who during the week report being less happy?

Demographic Characteristics

General traits of the person have rather strong relationships to happiness. The largest difference reflects the Social Class of Community (SCC) in which the teenagers live. SCC was computed on five levels of increasing affluence: Poor (mostly single-parent, unemployed), Working Class, Middle Class, Upper-Middle Class and Upper Class. Contrary to expectations, the highest level of happiness was reported by young people living in Working Class communities, then by those in Middle Class, Poor, Upper Class and finally Upper Middle Class environments. An ANOVA in which all the demographic variables (i.e. age, gender, SCC, Ethnic background) were entered showed the strongest effect for SCC ($F = 8.09$, $p < 0.0001$).

Age was the second most important factor ($F = 6.45$, $p < 0.0001$). Happiness decreases through the teenage years; it reaches its lowest point by age 16, and then shows a small recovery by age 18 (see also Moneta, 2001). Gender and Ethnic background did not show significant effects, even though African-American and Hispanic youth had higher levels of happiness than Caucasians and Asians – but these differences appear to be due more to social class than to ethnicity.

Boys and girls generally did not differ in terms of happiness. However, the ANOVA showed one significant interaction ($F = 2.92$, $p < 0.02$) between gender and SCC. Poor girls (5.5) experience more happiness than Poor boys (5.0) ($t = -2.51$, $p < 0.014$).

Activities

In the previous section, we have seen that teenagers are happier when they do certain things (e.g. in leisure) than when they do others (e.g. study). Here we are looking at the issue from a trait-like, rather than a state-like perspective: in other words, are teenagers who spend more time in leisure activities during the week happier than those who spend more time studying?

Contrary to what one might expect, the amount of time spent in school-related activities during the week is positively related to happiness (multiple regression (MR), $t = 2.25$, $p < 0.024$), indicating that those teenagers who study more are in fact happier, even though studying is lower in happiness than most other activities. This apparently paradoxical finding is one of the important ways in which the ESM can reveal the fact that relationships that are negative at the state level can at time be positive at the trait level. The percent of time students spend socializing is also positively related to happiness ($t = 2.61$, $p < 0.009$). In this case, both momentary and Person–Level relationships point in the same direction. Young people feel happier when they interact with peers, and those who do so more often are on the average happier than those who interact less.

One unexpected finding was that of the smaller activity categories the one that showed the strongest relation to happiness at the person level was Reading a book for pleasure. The relationship was negative ($t = -2.09$, $p < 0.04$), suggesting that teenagers who spend more time during the week are also generally less happy. This result could be due to the fact that young people who read more are less often in the company of their peers. There is a slight negative correlation (-0.09 , $p < 0.08$, $n = 825$) between the amount of time spent reading and the percent of time spent with friends.

Companions

The social context affects happiness in complex ways. Those young people who spend more time alone are in general less happy (MR, $t = -3.85$, $p < 0.0001$). Those who spend more time with relatives during the week tend to be happier (MR, $t = 2.24$, $p < 0.01$). Although being with friends is related to happiness it is not significantly so, because older teenagers spend more time with friends, while being less happy than younger ones. Therefore, the age effect cancels out the beneficial effect of spending time with friends.

TABLE II
Standardized regression coefficients from multiple stepwise regression of mean (Person–Level) happiness on Person–Level mood variables (controlling for demographic variables)

Independent variables	Mean (Person–Level) happiness	T-score	P <
Strong	0.099	2.5	0.012
Feel Good About Self	0.093	6.62	0.000
Sociable	0.160	4.5	0.000
Excited	0.230	11.74	0.000
Proud	0.230	5.75	0.000
Active	–0.050	3	0.003
Grade Level in School	–0.050	–5.06	0.000
Constant	1.650	9.2	0.000
Adjusted R^2	0.540		
F-value	135.3		0.000

The Relation of Happiness to Other Moods

What other dimensions of subjective experience differentiate a happy young person from one who is less so? To answer that question, we did a regression in which the dependent variable was a person's average happiness score for the week, and the predictors included all the other mood variables. Such a MR explained 55% of the variance in happiness (Table II).

The strongest predictor of trait happiness was how Excited (vs. Bored) a person felt, followed by the variables Feeling Good about Self, Proud (vs. Ashamed), Sociable (vs. Lonely), feeling Active and Strong (vs. Weak). The correlation coefficients of these variables with Happiness (and controlling for age), were 0.58, 0.59, 0.47 and 0.53, respectively (with $N = 799$, all $p < 0.0001$).

Happiness and the Conditions for Flow

It was expected that young people who spend more time in situations they perceive as being conducive to flow would be on the whole happier. To measure whether a person was more likely to be in a Flow condition we calculated the percent of time spent in situations that were above the mean level of challenge and the mean level of skill at the same time. When a person was above the mean of skills but below mean challenge, the condition was considered conducive to Relaxation. High challenges and low skills were counted as Anxiety, and low challenges with low skills as Apathy.

TABLE III
Standardized regression coefficients from multiple stepwise regression of mean (Person–Level) happiness on flow conditions (controlling for demographic variables)

Independent variables	Mean (Person–Level) happiness	T-score	P <
Flow Condition	0.013	6.05	0.000
Relaxation Condition	0.008	4.93	0.000
Grade Level in School	–0.097	–7.01	0.000
Social Class of Community	–0.080	–3.1	0.002
Constant	5.560	31	0.000
Adjusted R ²	0.124		
F-value	29.56		0.000

Table III shows the final regression model, which includes Age and the Gender by SCC interaction as well as the four Flow-related variables. The full model explains 12.4% of the variance in happiness. The frequency of time spent in the Flow condition is a very strong predictor of happiness ($t = 6.05$, $p < 0.0001$) even after taking the significant demographic variables into account.

The Final Model

To see if combining all the correlates of happiness in one model would enhance understanding of the phenomenon, we created a final regression model that included the most promising variables from previous analyses – excluding, however, the mood variables which as we have seen above (Table II), explain 54% of the variance in happiness.

The resulting model is the one reported in Table IV. The combined predictive value is not much higher than that of some of the demographic variables taken singly, as it attains only 15% of the variance in happiness. Nevertheless, the pattern is suggestive.

The pattern can be summarized as follows: Happier teenagers tend to be younger, from lower socio-economic circumstances. They spend less time alone and less time reading books. They spend more time either in high challenge/high skill Flow producing situations, or low challenge/high skill Relaxing situations. These are also the young people who feel more Excited, Proud, Sociable, Strong, Active and Good about themselves.

TABLE IV

Standardized regression coefficients from multiple stepwise regression of mean (Person–Level) happiness on flow conditions and time usage (controlling for demographic variables)

Independent variables	Mean (Person–Level) happiness	T-score	P <
<i>Percent of Time</i>			
Spent Alone	–0.010	–4.60	0.000
In Flow Condition	0.013	6.2	0.000
In Relaxation Condition	0.009	5.22	0.000
Spent Reading/Writing for Fun	–0.014	–2.08	0.037
Grade Level in School	–0.080	–5.8	0.012
Social Class of Community	–0.065	–2.5	0.000
Constant	5.590	31.46	0.000
Adjusted R^2	0.150		
F-value	24.77		0.000

DISCUSSION

The ESM makes it possible to separate the immediate context of happiness from more long-term conditions. In terms of momentary effects, it is clear that what one does and whom one is with will modify a person's base-line of happiness. Freely chosen activities and the company of peers raise the level of happiness, while obligatory activities like schoolwork and the condition of solitude lowers it. The social structure of time affects happiness in a similar way: young people are much happier in the afternoons and evenings of weekdays, when they are free of requirements imposed by adults, and on weekends. But by the end of the weekend, on Sunday afternoons, their happiness decreases in anticipation of the school-day to come.

The demographic analyses provide rather counterintuitive suggestions. That happiness decreases during the conflicted teenage years is not surprising, and the recovery around age 18 has been documented before (Moneta, 2001). What is surprising is the lack of positive correlation between happiness and financial affluence. That teenagers from working-class, and even impoverished backgrounds should be happier than upper-middle-class teenagers living in exclusive suburban communities is difficult to explain. It is possible that some selection bias is responsible for this result: perhaps relatively more students from lower class backgrounds who were happy volunteered and completed

the ESM compared with more affluent students. But the rates of volunteering had been high in all schools, including the ones in the inner city neighborhoods, so this explanation could not account entirely for the findings. Perhaps in the affluent suburban sub-culture it is not “cool” to admit to being happy. Or perhaps material well-being is in fact an obstacle to happiness. Recent research on materialism suggests that excessive concern with consumer goods and material possessions is inversely related with positive developmental outcomes (Schmuck and Sheldon, 2001). In any case, this finding clearly deserves further study.

Aggregating responses over a week’s time suggests that happiness is strongly related to an extraverted lifestyle. Not being alone, feeling excited, proud, being in high-challenge, high skill situations are all related to how happy a young person feels. It seems that at least at this stage of life an experience of what we may call “vitality,” or *eros*, is the most distinctive feature of happiness (Csikszentmihalyi, 1990; 1999; see also Ryan and Frederick, 1997, for recent studies dealing with vitality).

At the same time, it is important to notice that studying, which produces an experience of sadness as it is occurring, helps young people feel happier in the long run. This is an example of how building “psychological capital” involves the transformation of potentially negative experiences in positive experience over time (Csikszentmihalyi, 2003). For example, in a longitudinal study of talented teenagers we found that only those who learned to enjoy practicing their talent (i.e. mathematics, music, science, art, athletics) were able to continue developing it through the high school years. Those who became bored or stressed when working on their talent sooner or later gave up, while those who experienced flow in their work continued to perfect their talent (Csikszentmihalyi et al., 1997).

These results suggest that momentary happiness, at least for young people, is a function of the ability to express their potential vitality as fully as it is possible given the socialization demands the adult world places on them. Teenagers ascribe “happiness” to their moods when they are in situations of relative freedom, in the company of age-mates, able to engage in flow activities that stretch their skills and makes them feel alive and proud. The same conditions are implicated in more enduring, trait-like happiness. Here, however, happiness is also affected by preparation for the future: young people who study more are on the whole happier, presumably because they realize that

by building psychological capital the range of opportunities and hence their freedom will increase in the future.

If this is the case, the results have important implications for education and social policy. Happiness will increase to the extent that individuals are provided with the means to learn skills that can be deployed to meet reasonable challenges; that they are given freedom to express themselves within bounds of responsibility; that they are allowed to experience the joy of interaction with peers of one's choice and with adults that care for their well-being. These requirements for happiness presumably operate at every level of societal complexity, from the macro-level of the economy and political structure to the meso- and micro-levels of community, school and family. There are clear trends in contemporary life that militate against such conditions. It is difficult for a young person to be happy when living in a sterile suburb that lacks opportunities for action, forced to attend schools where there is little chance to express oneself except in abstract intellectual terms, surrounded by a small nuclear family that is seldom together and relaxed enough to interact freely. Understanding more clearly the conditions that affect happiness is a prerequisite if social scientists are to help improve the quality of life.

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