

NATIONAL ENDOWMENT FOR THE ARTS

AUDIENCE IMPACT STUDY LITERATURE REVIEW



Prepared by WolfBrown



ART WORKS.

arts.gov

Table of Contents

<u>Sections</u>	<u>Page</u>
Potential Constructs	3
<i>Expectations and affect</i>	3
<i>'Immediate' experiences</i>	4
<i>Recollections</i>	9
<i>Social Indicators of Well-being</i>	11
Commonly Used Measures of Affect, Happiness, and Well-being	12
<i>Affect Balance Scale</i>	12
<i>The Happiness Measure</i>	12
<i>Subjective Happiness Scale</i>	12
<i>The Delighted-Terrible Scale</i>	13
<i>The Positive and Negative Affect Schedule</i>	13
<i>The Authentic Happiness Inventory</i>	14
<i>Curiosity and Exploration Inventory</i>	15
<i>Inspiration Scale</i>	15
Museums & Exhibitions	16
<i>Affect</i>	16
<i>Methodology</i>	18
References	19
Additional Resources	24

WolfBrown conducted this literature review in October 2011 in partial fulfillment of its contract with the NEA to design and pilot test a survey of how audiences are affected by arts programs. The literature review focuses on areas of knowledge that have not previously been reviewed in-depth by WolfBrown in connection with its previous work assessing the intrinsic impacts of arts events. The report is organized in the following sections:

- ❖ **Potential Constructs**
- ❖ **Commonly Used Measures of Affect, Happiness, and Well-being**
- ❖ **Museums & Exhibitions**

Potential Constructs¹

EXPECTATIONS AND AFFECT

People are not very good at predicting the durability and intensity of their future emotions. On the one hand, people tend to overestimate the duration of negative affect and underestimate the rate of their adaptation to positive events (Gilbert et al. 1998). On the other hand, people tend to anticipate stronger affective reactions to both positive and negative events than they report experiencing when these events transpire. Moreover, people who focus exclusively on the event itself generally anticipate stronger emotional reactions than people who also account for relevant past events (the phenomenon called ‘focalism’, Wilson et al. 2000). Finally, people who are prompted to focus on specific target events anticipate stronger emotional response than those who are prompted to focus on relevant previous experiences (Buehler and McFarland 2001).

Why are expectations inaccurate? Kahneman and Tversky (1996) and Buehler and McFarland (2001) suggest that, first, people often develop intuitive theories about the emotional impact of various events—through their socialization and past experience—and these theories may err systematically. Second, when people think about future events, they tend to focus on that event alone and do not take into account the mitigating effect of many other (neutral) circumstances affecting them, ranging from waiting in line to social mingling afterwards. Finally, people tend to imagine a single (idealized, most desirable) scenario of an event, which normally deviates from the real-life flow of the event. Not surprisingly, the gap between the expected and experienced affect of an event tends to be wide for gradually unfolding events compared to short-term events (for example, a three-week bike trip compared to a two-hour musical performance) due to a greater number of unforeseen circumstances and unanticipated disappointments in the former case. Note, however, that it is important not to overstate or assume the problem of predicting feelings—many predictions are quite accurate.

¹ By Maria Medvedeva, with Jennifer Novak-Leonard & Alan Brown. Commissioned by WolfBrown.

² Contributions made by Slover Linett Strategies

³ Adapted from Brown, Alan S. and Jennifer L. Novak. *Assessing the Intrinsic Impacts of a Live Performance*.

Methodological Notes

Sample methodology. Wirtz et al. (2003) surveyed participants at six points in time: prior to vacation (email questionnaire two weeks prior and again 2-4 days prior to vacation), then during vacation (short computerized questionnaire using personal digital assistant (PDA) reminders seven times per day every day during vacation), and afterwards (2-4 days after returning from vacation and four weeks post vacation). All that time, the participants were asked the same set of questions except for the verb tense changes: participants predicted the intensity of their five positive emotions (*positive affect*: sociable, happy, calm, pleasant, and joyful) and five negative emotions (*negative affect*: irritated, guilty, sad, worried, and unpleasant), each on a scale from 0 (not at all) to 6 (maximum intensity). Also, on a scale ranging from 1 (disagree) to 5 (agree), participants endorsed three statements designed to capture their anticipated overall subjective experience: "I expect to enjoy spring break," "I think this break will be fun," and "I will be satisfied with this vacation". Finally, at week five post-vacation the participants answered the future choice question: "Would you take this same vacation over again (assuming you hadn't just been there, but that you know what you now know)?" Responses were made on a scale from 1 (definitely no) to 4 (neutral) to 7 (definitely yes). Due to high (0.79) correlation across five positive affect measures, five negative affect measures, and three measures of overall experience, they were combined into three respective indices—positive affect, negative affect, overall experience. Second distinction was among predicted, online, and remembered experience.

Net affect index. Due to high correlation between positive and negative (reverse-scored) affect items, Buehler and McFarland (2001) computed composite indexes of predicted and experienced net affect by taking the mean of all affect items, instead of keeping positive and negative affect separately. Higher scores indicated more pleasant feelings. Note that this is the only article among those reviewed that collapses positive and negative affect measures into one index.

Timing of data collection. Buehler and McFarland (2001) also observed that affective reactions were not strongly correlated with the time interval between the survey of expectations and the survey of immediate experience. In two of their studies, the gap between survey of expectations and the survey of immediate experience was eight weeks; in their third study the time varied from three to six weeks. The authors also reported that at two weeks post-event the recollections of the event were still rather unbiased.

'IMMEDIATE' EXPERIENCES

Individual experiences and immediate emotional response to an event can be described in a number of ways, among them positive/negative/neutral affect and feeling happy, engagement, flow, savoring the moment, and satisfaction (utility).

Happiness and affect. Feeling happy is strongly associated with higher positive response to an event, and less so with lower negative affect or neutral state. In fact, neutral mood is more unhappy than happy (Brenner 1975; Fordyce 1988). Cross-cultural comparative studies using "collectivist vs. individualist" criteria show that even though the absolute level of happiness may vary, the choice of criteria and the usage

of 'happiness' constructs tend to be similar across cultures (Lee et al. 1999) and combine measures of global well-being (satisfaction with life-as-a-whole) and a mix of concerns including domain-specific concerns and one's criteria/values of well-being (Andrews and Withey 1976). Satisfaction with family life and social relationships is consistently found to be the most powerful predictor of satisfaction with life as a whole, followed by health (Fave et al. 2010).

Engagement. Following research on work engagement (Schaufeli et al. 2002), we can define engagement as a three-dimensional construct consisting of: *vigor*, characterized by high levels of energy, effort, resilience, persistence, and motivation to invest in the work; *dedication*, characterized by involvement in work, enthusiasm, and a sense of pride and inspiration; and *absorption*, characterized by immersion in one's work and the sense of time passing quickly. Although vigor and absorption (in the Utrecht Work Engagement Scale) tend to be highly correlated, it was found that collapsing them in one category was not statistically justifiable.

Flow. Similar to engagement, flow is based on mastering one's emotions. Mihaly Csikszentmihalyi, the author of the concept, started his research in mid-1960s studying artists and creative experience. The concept then developed into a broader theory within the positive psychology movement. Generally, flow can be defined as the mental state in which a person is fully immersed in a feeling of energized focus, full involvement, and success in the process of the activity. Flow is centered on motivation; it is a single-minded immersion, which may trigger intense positive emotions. Very rarely do people report flow in passive leisure activities, such as watching television or relaxing. Also, negative emotions or self-centeredness remain outside the flow experience. Flow includes ten components: clear goals; high concentration on a limited field of attention; a loss of feeling of self-consciousness; distorted sense of time; direct and immediate feedback; the challenge and the skills levels are both high and balanced; a sense of personal control over the situation; the activity is intrinsically rewarding; a lack of awareness about bodily needs (hunger, fatigue, etc.); absorption into the activity—action awareness merging (Csikszentmihalyi 1997). Flow is distinct from happiness.

Savoring the moment. During savoring the moment, one focuses on positive events as they occur so as to increase, intensify, or prolong positive emotions in the present. The intervention studies showed that treatment group, which focused on savoring the moment, experienced significant decreases in self-reported depressive symptoms and negative affect when compared to the control group. However, positive affect did not differ between the groups. Savoring the moment is closely related to mindful perception of one's experiences; however, savoring is restricted to positive response whereas mindfulness focuses on any and every emotion and experience (Hurley and Kwon 2011).

Satisfaction and happiness. Happiness and satisfaction/utility together describe one's experience of an event. Happiness relates to affect, whereas satisfaction relates to cognition. Michalos (1980) described them as the difference between want and need fulfillment. Happiness declines with age while life satisfaction goes up. Happiness

and affect show seasonal variation whereas life satisfaction is rather stable (Andrews and McKennell 1980).

Experienced utility. We can also draw a distinction between happiness and experienced utility. Happiness differs from utility in at least three ways (Ott 2010, in his review of Graham 2009): (1) happiness is more comprehensive; (2) happiness is about experienced well-being, utility is about expected well-being—that means that the contrast between experienced past and expected future might produce strong emotions without strong correlation with actual experienced life conditions (as in the case of immigration); (3) happiness is limited, utility is unlimited; happiness will reach a maximum level if inborn needs are satisfied.

One way to think about experienced utility is in terms of prioritizing. It has long been suggested that ‘experiential purchases’ produce more overall happiness than ‘material purchases’. In order to test this ‘experience recommendation’, Nicolao et al. (2009) compared retrospective happiness with material and experiential purchases, and found that experiences tend to produce both more (for positive purchases) and less (for negative purchases) happiness than do material purchases. The authors also found that adaptation happens more quickly for material purchases than for experiential purchases, which in part explains why experiences often induce more powerful emotional responses. After only a day, purchases that started at the same level of rated happiness had diverged enough to observe differences in retrospective happiness ratings. Van Boven and Gilovich (2009) suggest that people may adapt faster to material purchases because (positive) experiential purchases remain open to positive reinterpretation (Mitchell et al. 1997). As a consequence, memory keeps the experiences from declining in happiness over time. On average, Nicolao and colleagues (2009) argue, the most happiness obtained through purchasing is likely to be obtained through *experiential purchases that turn out well*.

Rewards and efforts. People often need to trade off between the magnitude and the probability of a reward for their investment (Kivetz 2003). Consider frequency programs that require effort (frequent purchases, such as reviewing products, completing surveys, shopping, exercising, gambling) and offer rewards. Generally, consumers are more likely to prefer sure-small rewards to large-uncertain rewards when they are rewarded for their effort compared to effort-free rewards. Individuals with low intrinsic motivation are more likely to prefer sure-small rewards to large-uncertain rewards, compared to individuals with high intrinsic interest in the required effort activity (e.g., "math lovers" versus "math haters"). Importantly, as required efforts increase, the preference for sure-small reward reverses in favor of large-uncertain rewards (in an *inverse* U-function of the effort level). Because extrinsic rewards may distract consumers from their intrinsic motivations, consumers may be more likely to invest effort when no (extrinsic) reward is offered compared to when an inadequate (i.e., too small or unlikely) reward is provided.

Physiological correlates of aesthetic perception. Our aesthetic perception of artworks includes not only cognitive and emotional, but also behavioral and physiological responses. Tschacher et al. (2011) used (1) wireless technology to collect data about bodily responses and (2) used immediate post-visit customized questionnaire about six

artworks—three they spent most time viewing and three determined in advance. The answers from 373 museum visitors to a Swiss museum were then condensed into five dimensions of aesthetic assessment: “Aesthetic Quality” (the work is rated as pleasing; beautiful; well done with respect to technique, composition, and content); “Surprise/Humor” (the work is considered as surprising; makes one laugh); “Negative Emotion” (the work conveys sadness, fear, anger); “Dominance” (the work is experienced as dominant, stimulating), and “Curatorial Quality” (the work is well staged and hung, suitable in the context of other artworks). Comparing scores for each of the six artworks with bodily responses, the authors found that an elevated heart rate was linked to an assessment of a painting as dominant and/or high in curatorial quality. Heart-rate variability was linked to perceptions of high aesthetic quality and surprise/humor. Skin conductance variability (used as an indicator of indication of psychological or physiological arousal) was also linked to a perception of dominance. Generally, heart-rate variability was most influenced by aesthetic emotional response; altogether, the participants’ reaction to the artworks accounted for up to 25 percent of participants’ physiological variance. It would be misleading, however, to think about “aesthetic appreciation as nothing but a neurological response.” (Tschacher et al. 2011, 8) This was the first study in which aesthetic perception was monitored in an art gallery rather than laboratory environment, thus allowing unrestricted viewers’ freedom of aesthetic choice and movement.

Arts attendance, participation, and creation. Using 2002 SPPA data, Ateca-Amestoy (2008) compared of two groups of people—those who never attend theater performance and those who do. Men and low-income individuals were more likely never to attend. The effect of education on theater attendance was inconclusive: one’s own formal education had an effect only on the basic level and parental education had no direct effect. The probability of attendance increased with age; females and single individuals were generally more likely to attend. Importantly, other kinds of theater consumption or participation greatly increased the probability of attendance: reading theater, consuming it on the media (in a passive way) and having received drama classes as an adult increased not only the probability but also the frequency of theater attendance. If a person in this subgroup reported that he/she would like to go more, then that person was more likely to participate more frequently. These results agree with Novak-Leonard and Brown’s (2008) observation, using the 2008 SPPA data, of a strong reciprocal relationship between arts participation and arts creation across different types of media; having had arts-specific education (for example, arts classes) significantly increased the probability of arts creation.

Another interesting finding about art attendance was by Upright (2004), who reported that the arts attendance of many married men and women was predicted as strongly by their spouse’s educational attainment and *arts socialization* (see methodological notes) as by their own. Moreover, the spouse’s effect was evident not only on the probability that spouses attend the same arts events, but even on the probability that they attend such events without their spouses.

Methodological Notes

Reconstructing or comparing. Open-ended questions allow respondents to rely on their personal definition of happiness or subjective well-being. Closed questions allow researchers to compare individuals and groups against a predetermined set of criteria describing happiness.

Flow. Sample question: “Do you ever get involved in something so deeply that nothing else seems to matter and you lose track of time?” A more precise—though expensive—way to study flow is the Experience Sampling Method, which provides a virtual filmstrip of a person's daily activities and experiences. At the signal of a pager or watch, which goes off at random times within each two-hour segment of the day, a person writes down in a booklet where she is, what she is doing, what she is thinking about, and whom she is with, then she rates her state of consciousness on various numerical scales (Csikszentmihalyi 1997).

On affect and happiness measures. Remember to distinguish among positive, neutral, and negative affect, and between measures of affect frequency and affect intensity. There are no conclusive results regarding the comparison of three-unit and seven-unit scales, though the seven-unit scales are more common. There is no conclusive evidence about the usefulness and validity of time (past vs. present) and group (close friends/family, typical American, all others) comparisons for the study of happiness. Michalos (1980) uses comparisons, whereas Andrews and McKennell (1980, 151) argue against them:

“There was a rather consistent tendency for measures employing three-point response scales to show lower validities than measures with scales having more response categories. It also appears that explicitly comparative measures, i.e., ones that involve comparisons over time or with other groups, are markedly less valid as reflectors of absolute evaluations of life-as-a-whole than are measures that call for a direct assessment.”

Ideal affect. Scollon et al. (2009) asked participants to rate 12 emotions (happy, joy, sociable, excited, proud, calm, sad, guilty, worried, anxious, irritated, bored) on how much the “ideal person leading the ideal life” would experience them, using a 1 (“never”)–7 (“always”) scale. The authors then created positive ($\alpha = .79$, six items) and negative ideal affect ($\alpha = .81$, six items) indices by averaging the ratings of like-valenced (positive/negative) emotions.

Short question about intrinsic motivation. One-question measure: from “I like math [poetry] much less than typical students” (=1) to “I like math [poetry] much more than typical students” (=7) (Kivetz 2003).

Arts socialization. Upright (2004) constructed the measure of arts socialization using the 1992 SPPA questions. The SPPA asked respondents a series of questions about courses or lessons in eight arts subjects: acting, ballet, dance, creative writing, art history or appreciation, visual arts, music appreciation, or musical performance. Respondents giving positive responses were questioned further to identify in which of four different life stages the classes occurred. Upright (2004) only considered classes taken before the age of 12 or between 12 and 17, both to assess the impact of

socialization that occurred in the respondent's youth and also to avoid the possibility that the course-taking may have been influenced by the spouse. The final measure of Arts Socialization assigned one point for each period in which a course was taken. The variable had a potential range of 0 to 16, but the maximum value in Upright's (2004) set was 8, with a mean of 1.59. Two-thirds of the respondents received scores of 0.

RECOLLECTIONS

Why are memories not objective? Although immediate measures might be more accurate for describing objective experiences, retrospective measures are better equipped for predicting choice. People's memories of events are often inconsistent with their recoded experience during the event for several reasons:

- Anticipated and remembered experiences are more affect-loaded (both positively and negatively) than on-line (immediate) experiences. In important ways individuals tend to overestimate the intensity of their experiences, both in their expectations and memories. Why? Similar with inaccurate expectations, people rarely account for the neutral moments between the events in their memories (Wirtz et al. 2003).
- Retrospective accounts of affect are especially influenced by the peak and final moment of an event, with little regard to the duration, mean or sum of that experience (see Fredrickson 2000 for the review of "peak-and-end" studies).
- Memories of emotion are influenced by cultural ideas whereas immediate emotions are mostly governed by temperament or possibly neurobiological individual differences (Scollon et al. 2009, 258). Positive emotions are more susceptible to memory culture-defined revision than the negative emotion system is.
- Ideal affect refers to the amount of emotion a person would ideally like to feel (Tsai et al. 2006). Culture (ethnicity, religious affiliation, and, to some extent, motivation) determines what emotions people consider desirable and the extent to which they prefer to feel them and remember them (Scollon et al. 2009).

How does experience influence future desired choices? Wirtz et al. (2003) found that remembered experiences—but not anticipated or on-line experiences—predicted future choices. Study participants recorded their expectations *before*, immediate emotions *during*, and memories of experienced fun and enjoyment *after* their vacation. Wirtz et al. (2003) found that, although immediate and remembered experiences were highly related, only the memory of fun and enjoyment, and not immediate fun and enjoyment, predicted *wanting* to repeat the experience (though no one knows if it was actually repeated). In fact, Wirtz et al (2003) suggested that when on-line and remembered experiences differ, individuals might prefer to make choice based on their memories. Since memories are less accurate, then we can say that individuals tend to make choices that do not maximize their hedonic experience, or utility.

Reminiscing: memories and affect. Reminiscing serves four major functions for older adults: helps establish and maintain personal identity, serves as a source of positive experience, and helps to cope with negative experience, and helps to obtain closure on traumatic life events. Similarly, young people tend to reminisce about pleasant memories about their family, friends, or romantic partners when alone; when feeling down; and when both alone and feeling down. In other words, positive reminiscence may serve primarily as a coping strategy for reducing or eliminating subjective distress (Bryant et al. 2005).

The more people reminisce about pleasant memories, the more positive are their reported emotional experiences. The adaptive value of reminiscence is not so much as a form of escape from present problems, but rather as a constructive tool for increasing awareness and providing a sense of perspective in the present. Moreover, using cognitive imagery to intensify recall is associated with greater reported savoring capacity, compared to using behavioral re-enactment or memorabilia to intensify recall (Bryant et al. 2005).

Methodological Notes

Sample methodology. There are distinct approaches to studying retrospection: individual vs. group, silent vs. oral, cognitive/intrapersonal vs. conversational/interpersonal, and purposive vs. spontaneous reminiscence. In order to study retrospective emotions, Scollon et al. (2009) asked their study participants to recall the percentage of time they felt each of the 12 emotions (happy, joy, sociable, excited, proud, calm, sad, guilty, worried, anxious, irritated, bored) during the experience-sampling week (i.e., “during the week in which you carried the palm pilot”). The authors informed the participants that “numbers do not need to add up to 100 percent since you may have felt more than one emotion at a time.” They then again aggregated the emotions to form pleasant and unpleasant emotion indices. Participants completed the retrospective measures at the end of the experience sampling week, one week later, and two weeks later. Alphas ranged from .74 to .87 ($M = .81$). Results did not vary for the different retrospective measures. Therefore, the authors took the average of the three assessments as their retrospective measure.

Reminiscing. To measure reminiscing, Bryant et al. (2005) asked how much time people typically spent reminiscing about pleasant memories (with a seven-point scale 1=very little to 7=a great deal). Open-ended items can be used to elicit spontaneous, unguided responses about how, when, and why people reminisce about pleasant memories, as well as the content of reminiscence.

Timing. Various studies used a wide range of timeframes to measure retrospective response, from two weeks to three months. Note, however, that Buehler and McFarland (2001) found that two-week recollections are still rather unbiased relative to the immediate experience. Thus, if two-week recollections are used to examine remembering, they need to be accompanied with later-collected data. It appears, that three-to-six weeks post-event is a reasonable early window to study recollections.

SOCIAL INDICATORS OF WELL-BEING

Andrews and Withey (1976) argue that the basic model of well-being includes entries that are called “affective evaluations”, thus suggesting that a person’s assessment of life quality involves both cognitive evaluations and some degree of positive and/or negative feeling, i.e. “affect”. Indicators of well-being occur at several levels:

1. Global well-being (“life-as-a-whole”)
2. Concerns:
 - A. Domains—“places, things, activities, people, and roles”. These are domains that people do not always share ~ a taxonomy of social institutions and agencies.
 - B. Criteria/values—“values, standards, aspirations, goals and—in general—ways of judging what the domains of life afford” ~ a shared dream.

Life-as-a-whole measure is a summary measure (Type A, or L3 measures)—a straightforward combination of two questions: “How do you feel about your life as a whole?” asked at two different times during an interview. This assessment is meaningful because: (1) there is, in a sense, a choice between continuing to live and not—most people do, and that probably suggests that they make a favorable evaluation of their life; (2) people tend to assess their life quickly and apparently with ease, even in day-to-day conversations. The authors identified a total of 68 measures of global well-being (pp.66-70). These 68 measures could be organized according to the perspective from which the evaluation is made: absolute (general, including full-range and part-range, vs. more specific qualities), relative (comparison), long-range and short-range (time).

“The Type A measures were largely independent of the respondent’s self-reported “mood” on the day he participated in the study, his sense of uniqueness, his sense of progress or decline in either the past or the future, the range and variability of changes in his feelings, how he evaluated the well-being of other people in general, and how he evaluated the well-being of a specific neighbor.” (Andrews and Withey 1976, 106)

Note: Information about a small number (six to 12) of heterogeneous life concerns “is sufficient to predict 50-62 percent of the variance in the Life 3 measure, essentially all that can be predicted even with additional concerns.” (Andrews and Withey 1976, 149)

Measuring and mapping concerns. Using previous surveys, interviews, previously published lists and official documents, the authors identified a list of 123 concerns (pp.32-34), including both domains and criteria. Perceptual map on p.41 shows the general overlaps of larger society, local area, job and economic prospects (also included costs and house) on one side of the map and family, other people and self, with religion on the other side. Beneficence was an outlier.

Results. (1) Current evaluations have virtually nothing to do with expectations about the future, and bear only rather modest relationships to perceptions of progress or decline relative to conditions in the past; (2) Perceptions of other people’s well-being: there seems to be not great “projection”. There is a general believe that others tend to be less satisfied with matters close and personal, and more satisfied with

more remote concerns; (3) The importance of concerns is linked to their position on the perceptual map especially in relation to oneself and one's family, but does not have much to do with its relation to life-as-a-whole; (4) Andrews and Withey (1976) were not able to find people who were distinct and separate in their feeling regarding well-being—in other words, they observed no clustering.

Commonly Used Measures of Affect, Happiness, and Well-being

AFFECT BALANCE SCALE (Bradburn 1969, 52) asks each respondent whether or not during the past few weeks he experienced each of five positive feelings (pleased about having accomplished something, proud because someone complimented you on something you had done, particularly excited or interested in something, on top of the world, that things were going your way) and each of five negative feelings (bored, upset because someone criticized you, so restless that you couldn't sit long in a chair, very lonely or remote from other people, depressed or very unhappy). The number of positive feelings experienced was used as a measure of positive affect (Positive Affect Scale) and the number of negative feelings as a measure of negative affect (Negative Affect Scale). The algebraic sum of these was used as a measure of the average quality of affect (Affect Balance Scale).

Sample interview questions (scale: “very often”, “fairly often”, “occasionally”, “rarely”, “never”):

1. How often do you feel that you are really enjoying life? Would you say very often, fairly often, occasionally, rarely or never? (positive)
2. How often do you feel downcast or dejected? Would you say very often, fairly often, occasionally rarely or never? (negative)
3. In general, how would you say you feel most of the time? Would you say very good spirits, fairly good spirits, neither good spirits nor low spirits, fairly low spirits, or very low spirits? (modal)

THE HAPPINESS MEASURE (Fordyce 1988) consists of two, self-reporting items measuring emotional well-being: (1) an 11-point, happiness/unhappiness scale, and (2) a question asking for the time spent in "happy", "unhappy", and "neutral" moods. The neutral percentage was included to allow the happy and unhappy mood estimates to vary independently. The HM scale is a measure of intensity (or quality) of happiness; the percentage estimates, a measure of its frequency (or quantity).

SUBJECTIVE HAPPINESS SCALE (Lyubomirsky & Lepper 1997) includes four questions:

1. In general, I consider myself: “1” not a very happy person ---- “7” a very happy person
2. Compared to most of my peers, I consider myself: “1” less happy” -----“7” more happy
3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you? “1” not at all ----- “7” a great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you? “1” not at all ----- “7” a great deal

THE DELIGHTED-TERRIBLE SCALE (Andrews and Withey 1976): includes seven on-scale categories “delighted”, “pleased”, “mostly satisfied”, “mixed (about equally satisfied and dissatisfied)”, “mostly dissatisfied”, “unhappy”, “terrible”. Additional off-scale categories: A=Neutral (neither satisfied nor dissatisfied), B=I never thought about it, C=Does not apply to me. Rationales for designing this scale: (1) previous “completely satisfied” – “completely dissatisfied” scale produced results heavily skewed toward higher satisfaction which did not allow to distinguish between “merely” and “extremely” satisfied and presented a challenge in statistical analysis. (2) wanted seven categories based on psychological and statistical considerations, which led to rejection of previously used three-category scales; (3) wanted to have each category labeled to avoid ambiguity, and so had to reject previously used “ladder” scales; (4) it was important to make it possible for respondents to opt out.

THE POSITIVE AND NEGATIVE AFFECT SCHEDULE (PANAS) (Watson, Clark, & Tellegen, 1988) is referenced in a wide variety of literature, including *Psychological Science*, *Social Indicators Research*, *The British Journal of Clinical Psychology*, *Administrative Science Quarterly*, *The Journal of Happiness Studies*, as well as on the “Authentic Happiness” website, homepage of Dr. Martin Seligman, Director of the Positive Psychology Center at the University of Pennsylvania. Developed by Watson, Clark, and Tellegen in 1988, this model consists of two 10-item mood scales:

- Positive Affect (PA): Interested, Alert, Attentive, Excited, Enthusiastic, Inspired, Proud, Determined, Strong, Active
- Negative Affect (NA): Distressed, Upset, Guilty, Ashamed, Hostile, Irritable, Nervous, Jittery, Scared, Afraid

The PANAS questionnaire uses a five-point scale, that ranges from 1- ‘very slightly or not at all’, 2- ‘a little’, 3- ‘moderately’, 4- ‘quite a bit’, to 5-‘extremely or very much’ (Watson, D.; Clark, L. A.; Tellegen, A 1988, accessed via <http://www.authentichappiness.sas.upenn.edu/testcenter.aspx>) (Crawford and Henry 2004, 250). In the Authentic Happiness website, respondents are asked to “read each item [from the 20 different emotions] and then click on the dropdown list next to the word and select one of the responses [from the five-point scale]” The respondent is instructed to answer based on how he or she feels “right now, that is, at the present moment” (ibid).

Figure 1 provides a two-dimensional rendering of the PANAS, which includes the primary 20-item measures, as well as a second dimension used to indicate high-versus-low activation and arousal. This rendering is important because it begins to demonstrate both the bipolar relationships as well as the relative independence between each of the dimensions (Tellegen and et al 1999, 298). “Figure 1 places moderate-activation variables, such as ‘happy’ and ‘sad,’ at opposite poles of the same dimension: Pleasantness-Versus-Unpleasantness; but it assigns high-activation variables, such as ‘enthusiastic’ and ‘distressed,’ to different and relatively independent dimensions: PA and NA, respectively” (ibid). This discussion ties into “considerable research [that] now suggests... people have two relatively independent systems in relation to affective life experiences; one for negative events and negative mood, and one for positive events and positive mood” (Maybery et al 2006, 62). This is an important concept to consider, primarily with mental health problems that “can be described as a combination of two affect dimensions rather than one” (ibid). For example, some researchers describe depression as a combination of high NA and low PA (63).

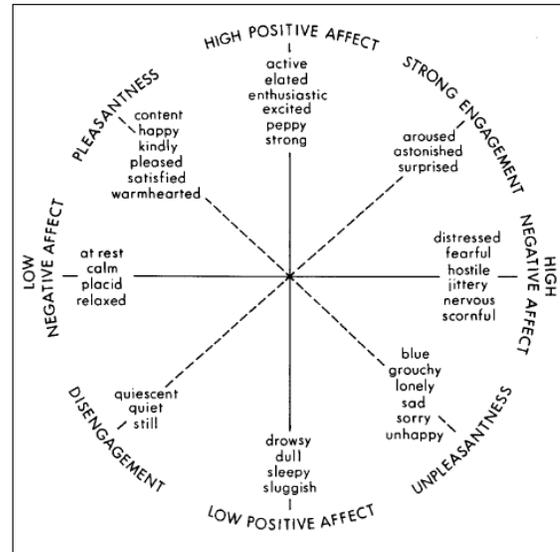


Fig. 1. Watson and Tellegen's (1985) two-dimensional map.

THE AUTHENTIC HAPPINESS INVENTORY QUESTIONNAIRE

Relevant questions from the questionnaire may include:

- A. When I am working, I pay more attention to what is going on around me than to what I am doing.
- B. When I am working, I pay as much attention to what is going on around me as to what I am doing.
- C. When I am working, I pay more attention to what I am doing than to what is going on around me.
- D. When I am working, I rarely notice what is going on around me.
- E. When I am working, I pay so much attention to what I am doing that the outside world practically ceases to exist.

- A. Time passes slowly during most of the things that I do.
- B. Time passes quickly during some of the things that I do and slowly for other things.
- C. Time passes quickly during most of the things that I do.
- D. Time passes quickly during all of the things that I do.
- E. Time passes so quickly during all of the things that I do that I do not even notice it.

CURIOSITY AND EXPLORATION INVENTORY (CEI) (Kashdan et. al. 2004) is a seven-item scale with two factors, exploration and absorption. “The CEI has good internal reliability, and shows moderately large positive relationships with intrinsic motivation, reward sensitivity, openness to experience, and subjective vitality. Moreover, the CEI has shown incremental validity over and above the overlapping constructs of positive affect and reward sensitivity” (<http://www.ppc.sas.upenn.edu/ppquestionnaires.htm#MAAS>)

The CEI questionnaire scale ranges from 1- ‘strongly disagree’, 2, 3, 4- ‘neither agree nor disagree’, 5, 6, to 7- ‘strongly agree’. The respondent is asked to use the scale for each statement, rating how he or she would “usually” describe her or himself (<http://ceicuriosity.tripod.com/>).

1. I would describe myself as someone who actively seeks as much information as I can in a new situation.
2. When I am participating in an activity, I tend to get so involved that I lose track of time.
3. I frequently find myself looking for new opportunities to grow as a person (e.g., information, people, resources).
4. I am *not* the type of person who probes deeply into new situations or things.
5. When I am actively interested in something, it takes a great deal to interrupt me.
6. My friends would describe me as someone who is “extremely intense” when in the middle of doing something.
7. Everywhere I go, I am out looking for new things or experiences.

Items 1, 3, 4, and 7 refer to the Exploration subscale and items 2, 5, and 6 refer to the Absorption subscale.

INSPIRATION SCALE (IS) (Thrash and Elliot 2003) consists of four statements that measure both frequency and intensity for said statement. “The IS scale predicts a range of positive consequences (openness to experience, work-mastery motivation, creativity, perceived competence, and self-determination) while controlling trait measures of these outcomes and trait positive affect” (<http://www.ppc.sas.upenn.edu/ppquestionnaires.htm#MAAS>)

Statement 1: I experience inspiration.

Statement 2: Something I encounter or experience inspires me.

Statement 3: I am inspired to do something.

Statement 4: I feel inspired.

How often does this happen? (Frequency)

How deeply or strongly (in general)? (Intensity)

The four frequency items are rated on a scale from 1 (*never*) to 7 (*very often*). The four Intensity items are rated on a scale from 1 (*not at all*) to 7 (*very deeply or strongly*).

Methodological Notes

Scaled responses. Numerous methods used a seven-point scale in a variety of Happiness and positive psychology questionnaires: Subjective Happiness Scale (SHS), Satisfaction with Life Scale, Meaning in Life Questionnaire (MLQ), Inspiration Scale (IS), Gratitude Questionnaire - 6 (GQ-6), Curiosity and Exploration Inventory (CEI), the Attributional Style Questionnaire (ASQ), General Happiness Questionnaire (Lyubomirsky & Lepper 1999).

Frequency and intensity. In “The Positive Event Scale: Measuring Uplift Frequency and Intensity in an Adult Sample,” Maybery et al (2006) contribute to the discussion surrounding the measurement of affect intensity and frequency (64). This discussion centers on negative affect, or stressors, and whether or not a “person's internal appraisal of a Stressor (subjective experience) and the frequency with which the event occurred (objective experience), are two distinct and conceptually different aspects of the stress experience”. Reich et al (1970) claim that “ideally, both intensity and frequency should be measured for a complete understanding of the impact of the environment on individuals.”

Museums & Exhibitions²

AFFECT

Most (but not all) published visitor research about outcomes looks at *learning* outcomes; very few people are taking a broader, more humanistic view of the museum experience.

One notable exception to the cognitive/learning focus of museum research is Duke (2010): Museums offer a unique and direct experience to the viewer, encouraging cognitive development through discussion, interpretation, and reconsideration of one's own perceptions.

- Museums can provide experiences that schools cannot; they can expand the definition of “learning” (i.e. “one that includes the cultivation of attention and thinking skills” (272))
- The domains of wonder and interpretation are “essential to the exercise of creativity” (273). When the viewer is faced with contradictory “data” (i.e. “scientific, sensory, or psychological/emotional” (273), said viewer has the opportunity to foster creativity. These methods of creative thinking are “learned through experience” (273) and not by routine.
- Duke references Luke and Knutson, authors of “Beyond Science: Implication of the LSIE Report for Art Museum Education,” (2010), noting that the aforementioned authors suggest two propositions within the arts education field, both of which have implications for “science educators—in fact, to all educators” (273):

² Contributions made by Slover Linett Strategies

- 1) The thinking and interpretation that occurs when a person looks “for meaning in art” may be similar to the ways in which people analyze and interpret complex scientific “data sets” (273).
- 2) The ability to cultivate language to accurately describe new visual and sensory experiences is “important to the learning process and can be improved with practice” (273). Museums are well suited for this type of learning as they are a “natural place to foster discussions about the material on view” (273).
- Duke goes on to reference Housen and Yenawine, co-authors of the Visual Thinking Strategies (VTS), who propose that the novice art viewer cannot absorb the information unless he or she “has experienced enough... puzzling about aesthetic meaning to be ready to make connections with it” (274)
- However, this does not mean that the novice viewer is “incapable of aesthetic experiences” (274); this just means that his or her experience is different than the expert’s experience.
- VTS: provides discussion techniques to museum workers (docents, educators) to better facilitate conversations and discussions with the viewers.
- “The word ‘empowerment’ might be aptly used to describe programs such as theirs [Housen and Yenawine]” (275)
- Duke claims that the “life experiences of ordinary art museum visitors” is plenty to encourage interpretive and meaningful aesthetic experiences (275)
- Museums are capable of supporting environments where “visitors structure their own inquiries” (277); encouraging the visitor to further question and explore the unknown

Another relevant line of thinking is pursued by several Smithsonian researchers in Pekarik and Mogel (2010). Pekarik and his co-author base their work in part on several previous exhibition- or museum-specific studies in the arts and history area, and in part on his earlier work with Zahava Doering (Pekarik, Doering, and Karns, 1999).

In addition Packer and Bon (2010) discuss that museums provide access to restorative experiences that help facilitate recovery from mental fatigue, similar to the restorative properties of natural environments:

- Mental fatigue is caused by the “stresses and strains of everyday life” (421)
- The notion of restoration is defined as “the process of renewing physical, psychological and social capabilities diminished in ongoing efforts to meet adaptive demands” (Hartig 2004, 2).
- Researchers have recognized the desire for restorative experiences through tourism and leisure studies (Pearce and Lee 2005; Snepenger, King, Marchall and Uysal 2006) (422).

- According to the Attention Restoration Theory (Kaplan 1995; Kaplan and Kaplan 1989) the capacity to focus is lost if one becomes mentally exhausted, a state referred to as “directed attention fatigue” (422). If one’s attention can be engaged effortlessly or involuntarily (aka ‘fascination’), as a result, the directed attention fatigue is reduced (422).
- According to Kaplan and Kaplan, there are four components that can provide a restorative experience, most commonly found in natural environments:
 - Fascination: “being engaged without effort”
 - Escape: “being physically or mentally removed from routine”
 - Extent: “the environment has sufficient content... to occupy the mind”
 - Compatibility: “providing a good fit with one’s purposes”(422)
- Packer and Bond claim that museums can provide the same four restorative components (422)
- The ability to self-direct or “free-choice” type of learning experience in a museum may be one of the most effective factors in providing a restorative environment (423)
- Research has shown that repeat visitors “are more likely to seek restorative experiences than first-time viewers” which may indicate that familiarity is a “prerequisite for a restorative experience” (424).
- The satisfying experiences framework (Pekarik, Doering, and Karns 1999) was initially developed to categorize the experiences that visitors generally find satisfying at a museum:
 - Objective experience: viewing a “rare, valuable, beautiful object”
 - Cognitive: “gaining information or understanding”
 - Introspective: “imagining, reflecting, reminiscing, and connecting:
 - Social: social interactions (424)
- Pekarik, Doering, and Karns determined that different types of museums, and different exhibits produce these experiences to varying degrees (424)

METHODOLOGY

- Bitgood, Stephen. “An Overview of The Methodology of Visitor Studies.” *Visitor Behavior*, Vol. III, No. 3 (Fall 1998), 4-6.
- Kerry Bronnenkant and Cheryl Kessler. “Data Collection in a Modern World (Or When Bad Things Happen To Good People).” *Visitor Studies Today*, Vol. 9, Issue 3 (2009), 29-31.
- Diamond, Judy. 1999. Practical evaluation guide: Tools for museums and other informal educational settings. Walnut Creek, CA: Altamira Press and American Association for State and Local History.
- Korn, Randi and Laurie Sowd. 1991. Visitor surveys: A user's manual. Washington, DC: American Association of Museums.

References

- Amabile, Teresa M., Sigal G. Barsade, Jennifer S. Mueller and Barry M. Staw. "Affect and Creativity at Work." *Administrative Science Quarterly*, Vol. 50, No. 3 (Sep., 2005), pp. 367-403. Published.
- Andrews, F., and A. McKennell. (1980). Measures of self-reported well-being: Their affective, cognitive, and other components. *Social Indicators Research* 8, 127-155.
- Andrews, F., and S. Withey. (1976). *Social indicators of well-being: Americans' perceptions of well-being*. New York, NY: Plenum Press.
- Ateca-Amestoy, V. (2008). Determining heterogeneous behavior for theater attendance. *Journal of Cultural Economics* 32, 127-151.
- Bradburn, N. (1969). *The structure of psychological well-being*. Chicago, IL: Aldine.
- Brenner, B. (1975). Quality of affect and self-evaluated happiness. *Social Indicators Research* 2, 315-331.
- Bryant, F., Smart, C., and S. King. (2005). Using the past to enhance the present: Boosting happiness through positive reminiscence. *Journal of Happiness Studies* 6, 227-260.
- Buehler, R., and C. McFarland. (2001). Intensity bias in affective forecasting: The role of temporal focus. *Personality and Social Psychology Bulletin* 27, 1480-1494.
- Busseri, Michael A., Stanley W. Sadava and Nancy Decourville. "A Hybrid Model for Research on Subjective Well-Being: Examining Common – and Component – Specific Sources of Variance in Life Satisfaction, Positive Affect, and Negative Affect." *Social Indicators Research*, Vol. 83, No. 3 (September 2007), pp. 413-445.
- Crawford, John R., Paul H. Garthwaite, Caroline J. Lawrie, Julie D. Henry, Marie A. MacDonald, Jane Sutherland and Priyanka Sinha. "A convenient method of obtaining percentile norms and accompanying interval estimates for self-report mood scales" (DASS, DASS-21, H ADS, PANAS, and sAD). *British Journal of Clinical Psychology* (2009). 48, 163-180
- Crawford, John R. and Julie D. Henry. "The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample." *British Journal of Clinical Psychology* (2004), 43, 245–265.

- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper & Row.
- Csikszentmihalyi, M. (1997). Finding flow: Reviews the book 'Finding Flow,' by Mihaly Csikszentmihalyi. *Psychology Today*. WWW-address: <http://www.psychologytoday.com/articles/199707/finding-flow>.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment* 49, 71–75.
- Duke, Linda. “The Museum Visit: It’s an Experience, Not a Lesson.” *Curator* Vol. 53, No. 3 (2010): 271-279.
- Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., and M. Wissing. (2010). The Eudaimonic and Hedonic Components of Happiness: Qualitative and Quantitative Findings. *Social Indicators Research* 100, 185-207.
- Fordyce, M. (1988). A review of research on happiness measures: A sixty second index of happiness and mental health. *Social Indicators Research* 20, 355-381.
- Fredrickson, B.L. (2000). Extracting meaning from past affective experiences: The importance of peaks, ends, and specific emotions. *Cognition & Emotion* 14, 577-606.
- Gilbert, D. (2007). *Stumbling on happiness*. New Yorkk, NY: Vintage Books, Random House.
- Gilbert, D. T., Pinel, E. J., Wilson, T. D., Blumberg, S. J., & Wheatley, T. A. (1998). Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology* 75, 617-638.
- Hurley, D. and P. Kwon. (2011). Results of a study to increase savoring the moment: Differential impact on positive and negative outcomes. *Journal of Happiness Studies*, DOI 10.1007/s10902-011-9280-8 (online first).
- Kahneman, D., & Tversky, A. (1996). On the reality of cognitive illusions. *Psychological Review* 103, 582-591.
- Kashdan, Todd B., Paul Rose, and Frank D. Fincham. “Curiosity and Exploration: Facilitating Positive Subjective Experiences and Personal Growth.” *Journal of Personality Assessment*. Vol. 83, No. 3 (2004): 291-305. Accessed via: <http://ceicuriosity.tripod.com/>
- Kivetz, R. (2003). The effects of effort and intrinsic motivation on risky choice. *Marketing Science* 22(4), 477-502.

- Lee, D., Park, S., Uhlemann, M., and P. Patsula. (1999). What makes you happy?: A comparison of self-reported criteria of happiness between two cultures. *Social Indicators Research* 50, 351-362.
- Lyubomirsky, S. and H. Lepper. (1999). A measure of subjective happiness: Preliminary reliability and construct validity. *Social Indicators Research* 46, 137-155.
- Maybery, D. J., Jenny Jones-Ellis, Jason Neale and Alexandra Arentz. "The Positive Event Scale: Measuring Uplift Frequency and Intensity in an Adult Sample." *Social Indicators Research*, Vol. 78, No. 1 (Aug., 2006), pp. 61-83
- Michalos, A. (1980). Satisfaction and happiness. *Social Indicators Research* 8(4), 385-422.
- Mitchell, T., Thompson, L., Peterson, E., and R. Cronk. (1997). Temporal adjustments in the evaluation of events: The 'rosy view'. *Journal of Experimental Social Psychology* 33(4), 421-448.
- Nicolao, L., Irwin, J., and J. Goodman. (2009). Happiness for sale: Do experiential purchases make consumers happier than material purchases? *Journal of Consumer Research* 36(2), 188-198.
- Nieboer, Anna, Siegwad Lindenberg, Anne Boomsma, and Alinda C. Van Bruggen. "Dimensions of Well-Being and their Measurement: The SPF-IL Scale." *Social Indicators Research* (2005) 73: 313-353.
- Novak-Leonard, J. and A. Brown. (2011). *Beyond attendance: A multi-modal understanding*. NEA Research Division Report #54. Washington, DC: National Endowment for the Arts: <http://www.nea.gov/research/2008-SPPA-BeyondAttendance.pdf>.
- Ott, J. (2010). Our Imagination of Future Happiness and Its Shortcomings: Daniel Gilbert, *Stumbling on Happiness*. *Journal of Happiness Studies* 10, 235-255.
- Packer, Jan and Nigel Bond. "Museums as Restorative Environments." *Curator* Vol. 53, No. 4 (2010): 421-436.
- Pekarik, Andrew J. and Barbara Mogel. 2010. Ideas, objects, or people? A Smithsonian exhibition team views visitors anew. *Curator: The Museum Journal* 53(4): 465-482.
- Pekarik, A., Doering, Z. and Karns, D. A. 1999. Exploring satisfying experiences in museums. *Curator: The Museum Journal*, 42(2): 152-173.
- Peterson, Christopher, Nansook Park and Martin E.P. Seligman. "Orientations to Happiness and Life Satisfaction: The Full Life Versus the Empty Life." *Journal of Happiness Studies* (2005) 6:25-41

- Reich, W.P., D.P. Parrella and W.J. Filstead: 1988, 'Unconfounding the hassles scale: external sources versus internal responses to stress', *Journal of Behavioural Medicine* 11, pp. 239-249. Rummel, R.J.: 1970
- Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies* 3, 71–92.
- Schimmack, Ulrich. “Affect Measurement Experience Sampling Research.” *Journal of Happiness Studies*, Vol. 4 (2003), 79-106.
- Schwarz, N. (2000). Emotion, cognition, and decision-making. *Cognition & Emotion* 14(4), 433-440.
- Scollon, C., Howard, A., Caldwell, A., and S. Ito. (2009). The role of ideal affect in the experience of memory and emotions. *Journal of Happiness Studies* 2009(10), 257-269.
- Seligman, Martin, E.P. Positive Psychology Center at the University of Pennsylvania. Accessed via: <http://www.authentic happiness.sas.upenn.edu/testcenter.aspx>
- Seligman, Martin, E.P. *Flourish*. New York: Free Press, 2011.
- Tellegen, Auke, David Watson, and Lee Anna Clark. “On the Dimensional and Hierarchical Structure of Affect.” *Psychological Science*. Vol. 10, No. 4 (1999) 297-303
- Thomas, D. L., and Ed Diener. (1990). Memory accuracy in the recall of emotions. *Journal of Personality and Social Psychology* 59, 291-297.
- Thrash, Todd and Andrew Elliot. “Inspiration as a Psychological Construct.” *Journal of Personality and Social Psychology*. Vol. 84, No. 4 (2003): 871–889. Accessed via: <http://www.ppc.sas.upenn.edu/inspirationscale.pdf>
- Tsai, J., Knutson, B., and Fung, H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology* 90, 288-307.
- Tschacher, W., Greenwood, S., Kirchberg, V., Wintzerith, S., van den Berg, K., & Tröndle, M. (2011). Physiological Correlates of Aesthetic Perception of Artworks in a Museum. *Psychology of Aesthetics, Creativity, and the Arts*. Advance online publication. DOI: 10.1037/a0023845.
- Upright, C. B. (2004). Social capital and spousal participation: Spousal influences on attendance at arts events. *Poetics* 32, 129–143.
- Van Boven, L., and T. Gilovich. (2003). To do or to have? That is the question. *Journal of Personality and Social Psychology* 85(6), 1193–1202.

Wirtz, D., Kruger, J., Scollon, C., and E. Diener. (2003). What to do on spring break? The role of predicted, on-line, and remembered experience in future choice. *Psychological Science* 14(5), 520-524.

Wilson, T. D., Wheatley, T., Meyers, J. M., Gilbert, D. T., and Axsom, D. (2000). Focalism: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology* 78, 821-836.

Additional Resources

These are additional resources utilized by WolfBrown in connection with its work assessing the intrinsic impacts of arts events and that inform the design of the NEA's current Audience Impact Study, submitted February 2012.³

A seminal report, *Gifts of the Muse: Reframing the Debate about the Benefits of the Arts* (McCarthy, et. al., 2004) catalogs and organizes the various benefits of arts experiences and argues that future research should focus on *intrinsic benefits* – the “effects inherent in the arts experience that add value to people’s lives.” (37).

While qualitative and anecdotal data documenting how individuals and communities are transformed through arts experiences is relatively abundant, quantitative data has been absent. Historically, arts and cultural organizations have used figures for ticket sales, attendance, and ancillary spending as proxy measures for intrinsic impact. But, these metrics do not indicate anything about the transformational nature of the underlying arts experience on the individual audience member or visitor. Alternative systems for measuring affect are conspicuously missing from the arts policymaker’s and practitioner’s everyday toolkit.

The search for better ways of assessing impact and understanding the affect of arts experiences is ongoing in the United States and other countries. A variety of resource documents are available to those wishing to learn more about recent efforts are available at: <http://intrinsicimpact.org/content/references>.

Key pieces of literature that have influenced and grounded WolfBrown’s prior work in this area are listed below.

REFERENCES

Anderson, Maxwell L. *Metrics of Success in Art Museums*. Getty Leadership Institute, 2004. <http://www.getty.edu/leadership/downloads/metrics.pdf>

Arts Education Partnership. *The Arts and Education: New Opportunities for Research*. Washington, DC: AEP, 2004. <http://www.aep-arts.org/files/publications/OpportunitiesResearch.pdf>

Audience Insight LLC for the John S. and James L. Knight Foundation, *Classical Music Consumer Segmentation Study*, 2002. http://www.knightfdn.org/music/pdf/KF_Classical_Consumer_Report.pdf

³ Adapted from Brown, Alan S. and Jennifer L. Novak. *Assessing the Intrinsic Impacts of a Live Performance*. San Francisco, CA: WolfBrown, 2007. www.wolfbrown.com/mups_downloads/Impact_Study_Final_Version_full.pdf

Brown, Alan. *The Values Study: Rediscovering the Meaning and Value of Arts Participation*, July 2004.
<http://wolfbrown.com/images/articles/AnArchitectureofValueGIAREaderWinter2006.pdf>

Brown, Alan. "An Architecture of Value," *Grantmakers in the Arts Reader*, Vol. 17, No. 1, Spring 2006.

Conner, Lynne. "In and Out of the Dark: A History of Audience Behavior From Sophocles to Spoken Word" in *Engaging Art: The Next Great Transformation in America's Cultural Life*, edited by Bill Ivey and Steven Tepper. New York and London: Routledge, 2007.

Csikszentmihalyi, Mihaly, *Flow: The Psychology of Optimal Experience*, New York: HarperCollins, 1990.

Fairchild, Andrea Weltzl. "Describing Aesthetic Experience: Creating a Model," *Canadian Journal of Education*, Vol. 16, No. 3, 1991, pp. 267-280.

Forrester, Jim and Debbie Spence. *Loving, Learning or Leaving? Analyzing How Visitors Engage with Your Offer*. April 2005. www.artsmarketing.org

Holden, John. *Capturing Cultural Value – How Culture has become a Tool of Government Policy*. London: Demos, 2004.
<http://www.demos.co.uk/files/CapturingCulturalValue.pdf>

Jackson, Maria-Rosario, Joaquin Herranz Jr., and Florence Kabwasa-Green. *Cultural Vitality in Communities: Interpretation and Indicators*. Washington, DC: The Urban Institute, December 15, 2006.
http://www.urban.org/UploadedPDF/311392_Cultural_Vitality.pdf

Jackson, Maria-Rosario, Joaquin Herranz, Jr., and Florence Kabwasa-Green. *Art and Culture in Communities: A Framework for Measurement*, Policy Brief No. 1. Washington, DC: The Urban Institute, November 1, 2003.
http://www.urban.org/uploadedPDF/311008_framework_for_measurement.pdf

Jackson, Maria-Rosario and Joaquin Herranz, Jr. *Culture Counts in Communities*. Washington, DC: The Urban Institute, 2002.
http://www.urban.org/uploadedPDF/310834_culture_counts.pdf

McCarthy, Kevin F., Elizabeth Heneghan Ondaatje, Laura Zakaras and Arthur Brooks, *Gifts of the Muse: Reframing the Debate About the Benefits of the Arts*. Santa Monica, CA: RAND Corporation, 2004.

McCarthy, Kevin F. and Kimberly Jinnett. *A New Framework for Building Participation in the Arts*. Santa Monica, CA: RAND Corporation, 2001.

Merli, Paola. "Evaluation the Social Impact of Participation Arts Activities: A Critical Review of Francois Matarasso's *Use or Ornament?*" *International Journal of Cultural Policy*, Vol. 8, No. 1, 2002, pp. 107-118.

Novak, Jennifer. *Understanding and Measuring Individuals' Benefits from Arts Participation: The Framing and Design of a Questionnaire*. Thesis, May 2004. Unpublished.

O'Muircheartaigh, Colm. *Measuring the Aesthetic Experience*, September 2001
<http://culturalpolicy.uchicago.edu/projects/aesthetic.html>

Taylor, Andrew. "Anticipation and memory," *Artful Manager blog*, September 7, 2006.
<http://www.artsjournal.com/artfulmanager/main/009010.php>

Taylor, Andrew. *Measuring Value: And Who Makes Value, Anyway?* Keynote address at New Jersey Theatre Alliance conference, September 23, 2005.

William Penn Foundation. *Culture Builds Community – The Power of Arts and Culture in Community Building*, http://www.williampennfoundation.org/usr_doc/cbc_publication.pdf.
Based on research by Mark Stern and Susan Seifert, Social Impact of the Arts Project, University of Pennsylvania School of Social Work, <http://www.sp2.upenn.edu/SIAP/>