Chapter 10

Balancing One's Time Perspective in Pursuit of Optimal Functioning

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Central to the discipline of "positive psychology" (Seligman & Csikszentmihalyi, 2000) is the answer to the question of what makes life worth living, or simply, what is a good life. What constitutes a good life is a multifaceted issue that positive psychology sets out to study across three levels: positive subjective experience, positive individual characteristics, and at the level of the qualities that contribute to a good society (Seligman, 1999). One key to learning how to live a fulfilling life is discovering how to achieve a balanced temporal perspective (Boniwell & Zimbardo, 2003).

The construct of a balanced time perspective provides a unique way of linking positive psychology's three levels of research. The study of time perspective investigates how the flow of human experience is parceled into temporal categories, or time frames, usually of past, present and future. The relative emphasis or habitual focus on any of these frames is often biased toward over-using some of them while under-using others. These learned temporal biases are influenced by culture, education, religion, social class, and other conditions. A balanced time perspective is the state and the ongoing process of being able to switch flexibly between these time frames as most appropriate to the demands of the current behavioral setting (Zimbardo & Boyd, 1999). Clearly, time perspective is a basic aspect of individual subjective experience. It also influences individual choices and actions, and can become a dispositional characteristic when an individual's biased time perspective becomes a dominant way of responding. At positive psychology's third level (the good society) time perspective is both influenced by cultural values and processes and can have a major impact on social behavior as well as on cultural discourses in society. Learning to overcome one's temporal biases that limit optimal, healthy functioning, and discovering how to achieve a balanced time perspective should be a mandate for all of us. We believe it should be a central component in the agenda of positive psychology.

Dealing with time is a fundamental feature of the human experience, both objective, or so-called clock time, and subjective, personal constructions of time. The invention of huge clocks on

impressive towers in most European town squares was a great feat of human creativity. They served to coordinate many community activities, among them, religious, agricultural, business, and social commerce in the many years before individual time pieces became commonplace. At first, time used to be controlled locally but that did mean there were almost as many time systems as there were communities (Lofy, 2000). It was only relatively recently, at the end of 19th century, when time became coordinated across geographical regions following the necessity to establish railway timetables. The impact of quantifying and standardizing time cannot be underestimated. The development of mechanical devices for measuring time changed the dominant representation of time in the West from cyclical to linear, from never-ending to irreplaceable. The unification and coordination of time, essential and beneficial for the development of economies, became a regulating structure of much human behavior.

Time not only underlies and regulates our social behavior, it penetrates the very fabric of our consciousness. The theme of time permeates poetry, songs, proverbs, homilies, metaphors, and even childhood fairy tales. An image of Cinderella, having to win over a Prince's heart within very tight temporal constraints, and mindful that present pleasures are transient, is likely to be embedded in the consciousness of many Western children. Similarly, the moral of the tale of *The Three Little Pigs* is not lost on most children who recognize that the lazy pig who builds his house quickly of straw is not the match for the fearsome wolf as is his future-oriented brother pig, who takes the time and effort to build his fortress of bricks. In some cultural constructions, time translates into a concept like rubber that can be stretched to fit human affairs, while in other more industrialized societies, human affairs are subordinated to temporal demands. In idiomatic use, time has become a commodity that can be saved, spent, used, found, lost, wasted, or maximized.

It is surprising to us that in spite of the obvious importance of temporal processes in our lives, their systematic exploration has received relatively little attention from psychology and the social sciences. The psychological study of subjective time has focused on time estimation, perceived duration of experiences, perceived rate of change, pace of life, and of course, reaction time (RT). The use of RT as a major dependent variable in experimental and cognitive psychology blends objective

recording of clock time and subjective responding. Time has also been conceived of as a key methodological factor that needs to be accounted for in study designs and measurement techniques or in assessing an experiment's validity (McGrath, 1988).

The focus of this paper is on the construct of "time perspective", which is viewed as an integral part of the subjective or personal experience of "Lived Time" (Gorman & Wessman, 1977). Time perspective represents an individual's way of relating to the psychological concepts of past, present and future. Time and its dimensions are not viewed as objective stimuli that exist independently of the person, but as psychological concepts constructed and reconstructed by the individual (Block, 1990). One of the broadest definitions of "time orientation," given by Hornik and Zakay (1996, p. 385), is the "relative dominance of past, present or future in a person's thought." Lennings (1996) gives a somewhat more specific definition of time perspective as "a cognitive operation that implies both an emotional reaction to imagined time zones (such as future, present or past) and a preference for locating action in some temporal zone..." (p. 72).

One literature review identifies up to 211 different ways of approaching the concept of time perspective (McGrath & Kelly, 1986). Such a multiplicity of approaches has resulted in various definitions and numerous methods of assessing dimensions of time orientation. Thus we can find some researchers focusing on emotional valence of the past or the future, others on time dominance, or dwelling on the past or the future, some dealing with continuities between the past, present and future, time relatedness, and many other facets of temporal perspective.

Time perspective (TP) is considered to have cognitive, emotional and social components. The formation of time perspective is influenced by host of factors, some learned in the process of socialization, such as one's cultural values and dominant religious orientation, kind and extent of education, socio-economic status and family modeling. But TP can also be influenced throughout one's life course development by the nature of one's career, economic or political instability, personal experiences with mind altering substances, traumatic events or personal successes. TP is further regarded as an expression of a person's own system of meanings that allows one to develop a coherent framework for living (Lennings, 1998). This central aspect of human nature can be shown to affect

attention, perception, decision making and a variety of mundane and significant personal actions. TP is one of the most powerful influences on virtually all aspects of human behavior. It can shape the quality of life of individuals and even the destinies of nations, such as when a majority of individuals adopt a biased temporal orientation that overly promotes a focus on the past, or the future, or the present.

Gorman and Wessman (1977) suggest that it is possible to regard temporal orientation, attitudes and experiences as persisting personality traits. Zimbardo and Boyd (1999) further agree that although TP may be affected by situational forces, such as inflation, being on vacation or under survival stresses, it can also become a relatively stable dispositional characteristic when a particular temporal bias comes to predominate one's outlook and response hierarchy.

The study of time perspective has often focused on one temporal zone, usually that of the future, or of the present in other studies. There are limited examples of research that focus on the combination of the three dominant time zones (Rappaport, 1990). Furthermore, the majority of studies have failed to provide a multidimensional picture of time perspective, focusing on either time orientation as a preferred temporal region or time extension – the length of time projected into the past or the future. The few earlier empirical studies that investigated all three time zones in the same group of subjects produced scarce and inconsistent findings (Carr, 1985).

MEASUREMENT OF TIME PERSPECTIVE

There have been several attempts to develop a measuring instrument of time perspective on the basis of combination of past, present and future orientations. These endeavors have included, amongst others, the Circles Test (Cottle, 1976), Time Structure Questionnaire (Bond & Feather, 1988), Time Lines (Rappaport, 1990), and others. However, the majority of these instruments exhibited low reliability and scoring difficulties and measured only one or two temporal regions, with the past time perspective being largely ignored (Kazakina, 1999). The Stanford Time Perspective Inventory (STPI) developed by Zimbardo (1992) included five predominant orientations: past regret orientation, future achievement orientation, two types of present orientation – hedonistic and fatalistic, and time press

factor. However, this factor structure proved to be relatively unstable with subsequent factor analyses yielding 4, 5 or 7 factors (Lennings, 2000a; 2000b).

The Zimbardo Time Perspective Inventory (ZTPI) is the latest modification of the STPI, which has addressed the shortcomings of the previous scales (Zimbardo & Boyd, 1999). This single, integrated scale for measuring TP has suitable psychometric properties, is reliable, valid and easy to use. Five main factors underlie this empirically derived factor structure: Future, Past-Positive, Past-Negative, Present-Hedonistic and Present-Fatalistic. They were derived from an extensive series of exploratory studies (including interviews, focus groups, feedback from participants, theoretical consideration, and others) and have been continuously empirically refined for over a decade (Gonzalez & Zimbardo, 1985; Zimbardo & Boyd, 1999; Zimbardo & Gonzalez, 1984). Essentially, the scale provides a profile of relative values on each of these five factors for individuals or when aggregated, for groups. The same factor structure has emerged from recent translations and replications with French, German and Turkish samples. In practice, researchers typically highlight and compare individuals whose TP biases mark them as very high on one of these factors and low on others.

The ZTPI consists of 56 items that are assessed on a 5-point Likert scale ranging from very uncharacteristic (1) to very characteristic (5) of the respondent. A consistent five-factor structure was revealed through exploratory principal component factor analysis and further supported by confirmatory factor analysis. Thirty six per cent of the total variance is explained by these factors. The ZTPI was demonstrated to have high test-retest reliability, ranging from .70 to .80 for the different factors (Zimbardo & Boyd, 1999). The convergent and discriminant validity of the instrument was established through predicted correlational patterns of each of the five factors with measures of: aggression, depression, conscientiousness, ego-control, impulse control, state-trait anxiety, self-esteem, preference for consistency, reward dependence, sensation seeking, novelty seeking and consideration of future consequences. The results confirmed associations between individual factors of the ZTPI and predicted scales in combination with low associations with inappropriate scale constructs. For example, the Present-Hedonistic factor was found to be associated with a lack of consideration of future consequences, a low preference for consistency, low ego or impulse control,

but very high interest in novelty and sensation seeking, as well as not correlating with any past or future-oriented constructs. In order to insure that ZTPI items are not reflecting the same underlying dimensions as the above psychological constructs, Zimbardo and Boyd (1999) carried out further tests of discriminant validity by examining robust correlations between depression and conscientiousness with Past-Negative and Future ZTPI factors. It was concluded that despite significant correlations between these two pairs of constructs, they remain distinct and not entirely overlapping.

TP PROFILES AND FINDINGS FROM TP RESEARCH

A brief overview of features found to be characteristic of individuals who reveal a dominant bias on each of the five TP factors may help put substance on these conceptual bones. It should be clear that each of these factors may have some personal value to given individuals in particular contexts, but when they come to be an excessive orientation that excludes or minimizes the others, then they may become dysfunctional.

Items on the Future TP scale include, amongst others, *I am able to resist temptations when I know that there is work to be done;* and *When I want to achieve something, I set goals and consider specific means for reaching those goals.* The Future-oriented person always has an eye toward consequences, contingencies, and probable outcomes of present decisions and actions. She or he is dedicated to working for future goals and their attendant rewards, often at the expense of present enjoyment, delaying gratification, and avoiding time-wasting temptations. Such individuals live in a world of cognitive abstraction, suppressing the reality of the present for the imagined reality of an idealized future world. At micro levels of behavior they differ from those in other TP categories by being more likely to floss their teeth, eat healthy foods regardless of flavor, get medical checkups regularly and solve puzzles well. They tend to be more successful than others, both academically and in their careers. The third little pig who built his house from bricks, estimating the possible dangers and uncertainties of a wolf-filled future, instead of partying with his quick-and-easy, straw-house-building brother, was surely a future-oriented pig. The down side of excessive future orientation is minimizing the need for social connections, not taking time for occasional self indulgence, nor being grounded in a sense of community and cultural traditions.

The Past TP is associated with focus on family, tradition, continuity of self over time, and a focus on history. This can be either positive or negative. The Past-Positive TP reflects a warm, pleasurable, often sentimental and nostalgic view of one's past with emphasis on maintaining relationships with family and friends. These individuals have the highest sense of self esteem and happiness of those dominant on the other factors. Past-Positive scale contains items such as, *It gives me pleasure to think about my past;* and *I get nostalgic about my childhood.* The Past-Negative TP is characterized by items such as, *I often think of what I should have done differently in my life,* and is associated with focusing on personal experiences that were aversive or noxious. In general, a past orientation has the down side of being excessively conservative, cautious, avoiding change and openness to new experiences and cultures, and of sustaining the status quo even when it is not in the person's best interest.

A body of research marks present-oriented individuals living in western societies as at risk for failure of all kinds. The ZTPI distinguishes between two very different ways of being focused on the present. The Present-Hedonistic person lives in the moment, values hedonistic pleasures, enjoys high intensity activities, seeks thrills and new sensations, and is open to friendships and sexual adventures. He or she would score highly on items such as, *It is important to put excitement in my life*. That kind of person acts with little concern for the consequences of his or her actions by avoiding cost-benefit analyses and contingency planning. Indeed, all of us were such creatures as infants and children, essentially biologically driven, whose behavior is determined by physical needs, emotions, strong situational stimuli and social input. Life is about seeking pleasure and avoiding pain. The down side of this orientation is that behavior does have consequences, as behaviorist B. F. Skinner taught us so well. Present-Hedonists are at risk for succumbing to the temptations leading to virtually all addictions, for accidents and injuries, and for academic and career failure.

The Present-Fatalistic TP, on the other hand, is associated with hopelessness and immutable beliefs that outside forces control one's life, such as spiritual or governmental forces. It may be a rather realistic orientation for those living in poverty in ghettoes or refugee camps. It is not uncommon for the parents of poor children --living the hedonistic life -- to become fatalistically resigned to be

helpless in changing or improving the quality of their life. This TP orientation is expressed by statements including, *Since whatever will be will be, it doesn't really matter what I do;* and *My life path is controlled by forces I cannot influence.*

Zimbardo and Boyd (1999) demonstrate that both Past-Negative and Present-Fatalistic perspectives are associated with strong feelings of depression, anxiety, anger and aggression. Clearly such temporal perspectives create a negative self-image that handicaps attempts at constructive actions. Even though they may be reality-based in their origin, it is their maintenance and elevation to dominance in one's temporal hierarchy that makes them dysfunctional and non-adaptive among middle-class high school and college students functioning in schools in the United States.

The TP construct has been found to be related to many attitudes, values, and status variables, such as, educational achievement, health, sleep and dreaming patterns, romantic partner choices and more. It is also predictive for a wide range of behaviors, including risky driving, and other forms of risk taking, delinquency and sexual behaviors (Zimbardo, Keough, & Boyd, 1997), and also substance abuse of beer, alcohol and drugs (Keough, Zimbardo, & Boyd, 1999). Furthermore, it appears that scores on the ZTPI factors are indicative of choice of food, health choices, parental marital state, desire to spend time with friends and perceived time pressure, amongst other factors. For a full depiction of the role of time perspective in health and risk taking, see Boyd and Zimbardo (in press). It even predicts the extent to which unemployed people living in shelters use their time constructively to seek jobs (future-oriented), or waste time watching TV and engaging in other non instrumental activities and avoidant coping strategies (present-oriented) (Epel, Bandura, & Zimbardo, 1999).

Extension of such research data on individuals to the role of time perspective among nations and cultures is obviously more sociological, historical and epidemiological, but they reveal some fascinating patterns. Protestant nations tend to be more future-oriented than Catholic nations (due to the enduring legacy of the Calvinistic focus on earthly success as an indicator of being chosen for heavenly rewards). In turn, the Gross National Product indices are higher among Protestant than Catholic nations. Within countries, those living in southern sections tend to be more present-oriented than those in northern regions, above the Equator. Cultures with more individualistic focus tend to

more future-oriented than do those emphasizing collectivism. Western ways of life have become predominantly goal-focused and future-oriented in the service of capitalist values. The new trend toward globalization implicitly promotes a future oriented market economy of the major industrial nations on developing nations that have been more present or past oriented.

However, we must repeat that an excessive emphasis on any given time perspective type at the expense of the other orientations leads to an imbalance that may not be optimal for individuals nor ideal in the long run for nations. There are costs and sacrifices associated with valuing achievement-oriented, "workaholic," future TP traits over and above personal indulgences and civic and social engagement. Westerners are now spending less time on the following vital activies: family, friends, church going, recreation, hobbies, and even household chores (Myers, 2000).

It looks like Puritan values, recapitulated in, "Waste of time is the first and in principle the deadliest of sins" (Weber, 1930/1992, p.157) have finally won the game of modern life -- with a minor drawback of God heading the list of time-wasters. The rituals and narratives essential to a sense of family, community and nation are endangered and undermined, together with a sense of personal identity, by those living such totally work-focused lives.

BALANCED TIME PERSPECTIVE

Here is where the ideal of a "balanced time perspective" comes into play. It is proposed as a more positive alternative to living life as a slave to any particular temporal bias. A blend of temporal orientations would be adaptive, depending on external circumstances and optimal in terms of psychological and physiological health. "In an optimally balanced time perspective, the past, present and future components blend and flexibly engage, depending on a situation's demands and our needs and values" (Zimbardo, 2002, p.62). A curious finding emerged from a recent cross-cultural comparison of TP between U. S. and South African student samples. One of the temporal factors for South Africans consisted of a complex blend of items characteristic of separate future, past positive and present hedonistic factors in U. S. populations. (Zimbardo, 2001). For these respondents a balanced or integrated TP, that we have considered to be an ideal blend, constituted a single dominant factor and not three separate ones.

Some theorists have attempted to define a personality that is balanced in terms of its relationship with time. Litvinovic (1998), for instance, speaks of *productive time orientation.* She argues that it includes a positive evaluation of the past and of the future, not dwelling on the past, and a sense of continuity between the past, present, and the future. This construct appears to be similar to that of a balanced time orientation, although it does not include a positive present orientation but, instead, argues for continuity between the positive past and positive future.

Lennings (1998) distinguishes an *actualizer* profile of time perspective, which combines a positive attitude to time, strong sense of time awareness and temporal structure with personality variables, such as high achievement and self-control. He argues that this profile is optimal in terms of time functioning. Shostrom (1974) identified a notion of *"time competence"* as a necessary component of a self-actualizing personality. He writes: "The self-actualizing person is primarily Time Competent and thus appears to live more fully in the here-and-now. Such a person is able to tie the past and the future to the present in meaningful continuity; appears to be less burdened by guilts, regrets and resentments from the past than is a non-self-actualizing person, and aspirations are tied meaningfully to present working goals. There is an apparent faith in the future without rigid or over-idealistic goals." (Shostrom, 1974, p. 13). Shostrom (1968) also highlights the inadequacies of particular temporal biases. For instance, he talks of a future- oriented individual as identifying him or herself with their goals and unable to accept themselves for who they are. The past-oriented individual is incapable of seeing that the solution for any problem can only be found in the here-and-now. The Time Competence Scale is yet another attempt to measure both balance and continuity in an individual's time perspective (Boyd-Wilson, Walkey, & McClure, 2002).

People with a balanced time perspective are capable of operating within a temporal mode appropriate to the situation in which they find themselves. So when they spend time with their families and friends they are fully with them and value the opportunity to share a common past. When they take a day off work, they get involved in recreation rather than feel guilty about the work they haven't done. However, when working and studying they may well put on their more appropriate future TP hat and work more productively. Indeed, when work is to be done and valued, the balanced TP person

may get into the "flow" of enjoying being productive and creative – a present-hedonistic state for a future-focused activity. That is when work becomes play as the worker becomes "engaged" with the process of the activity and not only with a focus on the product of her or his labors.

Flexibility and "switch-ability" are essential components of a balanced TP, in our view. "The optimal time perspective depends upon the demands of the situation and its task and reward structure" (Epel et al., 1999, p.590). These researchers argue that among the unemployed living in homeless shelters and experiencing pressure to find other affordable accommodations, it may be better to be present oriented when dealing with an acute crisis. While future TP allows a greater degree of self-efficacy and fosters one's optimism for future gains, present orientation may be more effective in allowing oneself to be open to finding immediate solutions to current challenges. While evidence seems to suggest that temporal flexibility is important for dealing with extreme circumstances, it doesn't tell us much as to why such flexibility may be important in dealing with the hassles of everyday life. Are people with a balanced TP likely to be happier than the rest of us? There is no consistent empirical data we can rely on for a firm "yes," but reasonable conjecture pushes us in that direction.

TIME PERSPECTIVE AND WELL-BEING

Over the years there have been various attempts to establish a relationship between time perspective and well-being. However, taking into account the variety and complexity of measures of both time perspective and well-being it is hardly surprising that the findings are inconsistent and often contradictory. A number of scholars hypothesized that a time orientation with a focus on the present is a necessary prerequisite for well-being. Amongst them are Csikszentmihalyi (1992), Maslow (1971), and Schopenhauer (1851), with their emphasis on the value of here-and-now experiences (see Boyd-Wilson et al., 2002). Some empirical support for this claim has been found in correlations between present orientation and various measures of well-being including general happiness (Kammann & Flett, 1983), and life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). Furthermore, in a recent study with an older adult sample, Lennings (2000b) found optimism to be positively correlated with both stable time orientation and future avoidance factors (which are essentially a present time

perspective). Similarly, in another sample of older adults. Kazakina (1999) has established a relationship between positive past orientation and life satisfaction and between present positive perspective and positive affect. Carstensen and her collaborators have developed a scale that reflects changing conceptions of time over the life course in support of her theory of socio-emotional selectivity (Carstensen, Issacowitz, & Charles, 1999). As people become elderly, they narrow their social choices and intensify their emotional ties to a limited set of people, due to their awareness of the preciousness of limited time resources.

While such research on past and present time factors is a welcome addition to our knowledge, most of the literature highlights the positive correlations between various future orientation measures and well-being. Some authors argue that a focus on futurity is fundamental to well-being and positive functioning (Kazakina, 1999). This relationship can be seen in the study of Wessman and Ricks (1966) where happy male college students were significantly more likely to be future-oriented than less happy peers. The *density* of the future zone, usually measured by the number of plans, commitments and anticipated experiences, has been found to be positively correlated with well-being (Kahana & Kahana, 1983). The dimension of *emotional valence*, or positive attitudes towards the future, was consistently found to be associated with indicators of subjective well-being amongst older people. A positive future orientation is often viewed as the essence of personal optimism, which is conceptualized as the anticipation of positive changes in the future (Kazakina, 1999).

Wills, Sandy, and Yaeger (2001) examined the relationship between TP and early-onset substance use in elementary school students. The ZTPI was administered alongside the measures from stress-coping theory (esteem and control, resistance efficacy, coping patterns, substance use, recent negative events, positive and negative affectivity). Future orientation was found to be related to higher levels of perceived control and positive well-being (positive affect). Present orientation, by contrast, was related to perceived lack of control and negative affect. Furthermore, Zaleski, Cycon, & Kurc (2001) found that future time perspective, and especially possession of long-term goals, positively correlated with virtually all aspects of well-being, especially a meaningful life, social self-efficacy,

and realism/persistence. On the other hand, higher levels of present preoccupation were associated with greater degrees of emotional distress and hopelessness.

Bohart (1993) argues that the ability of humans to be future oriented is fundamental for human development, because it allows the sense of possibility, of being agentic, of taking responsibility and of making choices. The association of future orientation with a greater sense of personal power and control has been supported by empirical research. However, Bohart stresses the importance of the optimality of a balance between time perspectives because that would allow people to move into the future having reconciled with their past experiences while staying grounded in the system of meanings derived from the present.

Finally, a small number of studies have looked at the relationships between various measures of a generalized balanced time perspective and measures related to subjective well-being. Kazakina (1999) literature review indicates that dimensions of *temporal continuity* and *temporal balance,* which characterize time perspective as a whole, have been theoretically and empirically shown to be associated with well-functioning (Rappaport, Sandy, & Yaeger 1985). Temporal continuity, for instance, has been shown to correlate with intelligence, achievement needs, ego strength, self-actualization, purpose in life and positive perception of time. It has been confirmed that scores on the Time Competence scale (Shostrom, 1968) positively correlate with purpose in life and positive evaluation of the present (Robertson, 1978), as well as with creativity and positive perception of time (Yonge, 1975). A significant relationship between a productive time orientation and well-being in adulthood is shown in the research of Litvinovic (1998). Kazakina (1999) has examined the temporal balance between the past, present and future across multiple dimensions of temporal orientation, density, extension and emotional valence in older adults. Although she failed to find an association between temporal balance and well-being, this null outcome can be explained by the use of measurement tools with questionable psychometric properties (e.g., the Temporal Balance Scale and the Affect Balance Scale).

CRITIQUES AND FUTURE RESEARCH DIRECTIONS

Although there have been some recent attempts to examine relationships between time perspective and well-being, the majority of studies have continued to focus either on one of the temporal zones (that of past, present or future) or on one of the dimensions of time perspective (density, emotional valence, etc.). A small number of studies have used often arbitrary measures of a balanced time perspective that are difficult to compare directly. Similarly, the construct of well-being has been arbitrarily and selectively defined, with researchers focusing either on the emotional (positive and/or negative affect) or on the cognitive (satisfaction with life) components of subjective well-being (Argyle, 2001) -- rather than on the totality of this construct. The current state of inconsistency and ambiguity of findings points to the need for standardization in constructs and measurements before further examination of the relationship between time perspective and well-being.

It should not be surprising that various unrelated studies point to positive patterns of association between virtually all temporal zones and differing aspects of well-being. This is precisely because all three general factors of a balanced time perspective are important for different aspects of positive functioning. Operating within Past-Positive and Present-Hedonistic modes enhance individual's chances of developing happy personal relationships, which is a key factor in enhancing one's well being, according to research on exceptionally happy people (Diener & Seligman, 2002). Yet, Future TP is correlated with many factors that are strongly or moderately associated with well-being, such as optimism, hope, internal locus of control, and more. We strongly suspect the construct of a balanced time perspective will show a consistent correlation with well-being. Further research is urgently needed to examine this relationship between balanced TP and the sense of well-being, using multidimensional, valid and reliable measures.

Moreover, we need research to operationalize the concept of a balanced time perspective. It is also essential to conduct additional exploratory case studies with the aim of developing a working, rather than hypothetical, profile of individuals with an optimal or balanced TP. There is almost no research that deals with multifacited constructs, such as time perspective, using profile analyses of the complex of factor scores for each individual. Another needed venue for researchers and practitioners is

the development of intervention strategies that empower individuals to overcome the limitations of their learned, narrow temporal biases and to acquire a balanced temporal orientation. We turn next to the potential applications of the concept of time perspective in the "real world."

APPLICATIONS OF TIME PERSPECTIVE

Despite being conceived primarily at a theoretical level, the constructs of TP and a balanced TP offer considerable potential for practical interventions in clinical and occupational psychology. However, such implementions are conspicuous by their absence. Possible avenues of practical implementations can range from time-based clinical interventions with depressed patients, to rehabilition programs with disabled persons, and to time management counseling with elderly clients.

Consider the development of clinical interventions designed for people with cognitive distortions associated with recurrent depression. Often, these clients are negatively past focused, with global attributions, which taken together render them vulnerable to depressive ruminative cycles. An intervention program would focus on teaching them how to reconstruct past negative experiences by either neutralizing them or discovering some hidden positive elements in them. Clients could be given a slide-show methaphor training in which they learn to switch away from replaying the old slides of past negative experiences by inserting new slides into their tray and then viewing these encouraging perspectives of current positive experiences and imagined slides of a better future.

Persons suffering from disabilities typically must undergo long periods of physical rehabilitation that is effortful and painful. Many discontinue this critical treatment before it has had a chance to improve their condition, precisely because of these aversive aspects of the retraining. We believe that time therapy focused on building an enriched future orientation while minimizing the present would benefit such clients. It is only with a sense of hope of improvement, of belief that present suffering will pay off in the future, that anyone can continue in rehabilitation programs that have few immediate rewards and much pain (see Zimbardo, in press).

Knowledge and understanding of time perspective can be a useful tool in psychological counseling. An insight into how clients think and feel about past, present and future experiences and about their connectedness and disconnections serves as a starting point for therapeutic explorations.

Extending the ideas we have championed throughout this chapter, we believe that a strong, narrowly selective temporal bias in a client should alert a counselor or therapist of a fundamental platform on which many presenting problems are erected. Seemingly disparate problems may then be seen as symptomatic of a common underlying temporal misbalance, and thus the need for temporal adjustment and rebalancing (see Kazakina, 1999).

There are some rare examples of qualitative investigations of people's psychological attitudes and perception of time that reveal how discussions about time have had unexpectedly positive therapeutic effects (Elliot, 1999; Rappaport, 1990). An exploration of one's relationship with time has the potential to direct awareness towards fuller evaluations of one's life, towards finding the links and connections between past and present events. Doing so helps to develop a sense of continuity between temporal zones and facilitates the process of finding deeper meaning in one's existence. Such potential can be invaluable in working with specific categories of clients in clinical psychology, including the elderly and terminally ill. It is plausible that achieving a temporal balance can facilitate the sense of fuller involvement with life which some believe to be paramount for successful aging (Kazakina, 1999).

The concept of balanced time perspective can also be fruitfully implemented in an organizational context. It is our belief that the current pressures being experienced by workers in offices and factories around the world will not be resolved by more time-management techniques. Normative experience is that within about six months following a time-management training program, participants revert to their own practices of time management. We believe this happens for two reasons. First, these programs are promoted by management and essentially are designed to make workers more future oriented, more productive, and less wasteful of company time. But much of the sense of time press and work urgency comes from workers who are already overly future-oriented. They need very different time training. Secondly, most time management techniques are not tied to the actual psychology of people's understanding of time. The construct of time perspective has a potential to provide a theoretical underpinning for time management interventions. The focus of time management techniques can shift from advocating generalized time management strategies – like take

time off, or put more focus in one's work – to developing interventions based on an understanding of workers' TP profiles. Doing so would help in recognizing the associated internal states and TP cognitive biases that unconsciously dominate workers'. Such techniques can be useful in reducing, and ideally preventing, occupational stress. They can also be invaluable in solving the eternal dilemma of balancing the dialectic of work and play/leisure, or of work as a source of personal engagement versus a source of job burnout (Maslach & Leiter, 1997).

IN CONCLUSION

Working hard when it's time to work. Playing intensively when it's time to play. Enjoying listening to grandma's old stories while she is still alive. Meaningfully connecting with your friends. Viewing children through the eyes of wonder with which they see the world. Laughing at jokes and life's absurdities. Indulging in desire and passions. Saving for a rainy day and spending it when it's sunny. Recognizing the social and sexual animal in each of us that are complements the homo sapiens. Taking fuller control of your life. These are all part of the benefits of learning to achieve a balanced time perspective. They are the keys to unlocking personal happiness and finding more meaning in life despite the relentless, indifferent movement of life's time clock toward it final ticking for each of us. The value of the concept of a balanced time perspective is that it both suggests novel approaches to a wide range of psychological interventions, while offering yet another answer to positive psychology's enduring question – what is a good life, and how can we pursue it?

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