Life, surgery and the pursuit of happiness

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I am deeply grateful to all of you for the honor of serving as president of the Western Surgical Association. Simply said, from my residency at the University of Michigan my professional career has been tied to this organization. My mentors at Michigan, Bill Fry, Jim Stanley, Tom Dent, Jerry Turcotte, and Norm Thompson, were proud and active members. I presented my first paper in 1975 at the Broadmoor as a third year resident with a level of anxiety which was understandable considering the spirited discussion by George Block. Like many other interactions at this meeting, that random contact with George led to a 20 year friendship which I cherished. In fact, in the last thirty years, the greatest number of my co-authors, colleagues and closest physician friends have been members of our organization.

When I rejoined the executive committee this year, five years after my term as treasurer ended, I was struck by the commitment and dedication of the senior officers lead by secretary Jerry Jurkovich and the hard working committee members who have put this outstanding meeting together. I can assure you that, thanks to their daily efforts, the Western is in excellent shape and continues to meet its mission first articulated in 1891. The best indicators of health are the robust attendance figures for our yearly meetings and, especially, the superb and large slate of new members. They represent the best and brightest of community and academic leaders from a remarkably wide geographical distribution. The fact that so many of you actively recruit your colleagues to join speaks eloquently that the collegiality and vigorous academic exchanges of this organization add value to your personal and professional lives.

As all of you well know, a professional career is but a part of the satisfaction and joy of life. Our immediate family, which now includes two wonderful parents, five children, one son-in-law and

two adorable grandchildren (an editorial comment), is my greatest pleasure. This blessing is due, in the largest measure, to the herculean nurturing and amazing organizational talents of my wife Diane who is and will always be the center of my life. I was never more blessed then when she entered my life again 14 years ago. We have experienced many great times, and a few hard times, and my love for her has only deepened.

Indeed, this intersection between the personal and professional - and how one can find happiness therein - is the subject of my address this morning. The founders of our country articulated the "unalienable rights" of each individual to pursue happiness and not unduly prevent others from doing the same. As we all know, there are no shortage of challenges along the road to this ideal state. In our lives, they include the many changes in the practice and business of medicine which have mandated not so subtle behavioral modifications for survival, let alone prosperity.

I will briefly review those buffeting winds and, more to the point of this exercise, attempt to escape that mindset to consider what we really know about happiness. The science of so-called "happiness research" has blossomed in the last decade, merging this field of traditional philosophic inquiry with psychology, neuroscience and economics, although I would concede that finding a happy economist today may be a stretch. Finally, I will conclude with a modest action plan of how our attitudes and behaviors can be aligned to better serve our pursuit of the elusive goal of enjoying a happy life.

Let us begin with the fiscal realities. It is, as they say in Texas, a "true fact" that the average personal income of American physicians has declined in the last decade. Data from 1995- 2003

demonstrates an overall decrease in income of 7.1% in all physicians with a decrease of 8.2% in surgical specialists.[1] Although the alterations in reimbursement methodology that contributed to this change were presumably focused on improving the income of primary care physicians, in fact, their income suffered the most, declining 10.2% over the 8 years. This is an excellent example of the too common end result of governmental "assistance."

On the expense side of the ledger, medical liability insurance costs have recently leveled off although the personal toll of any malpractice action remains deeply wounding. Harder still to rationalize is the remarkable variability of the liability climate across the country. The incidence and cost of such actions is so heterogeneous that malpractice awards per physician per year vary 5 to 10 fold between states depending on the specific legislative environment. As an example, the number of million dollar malpractice verdicts in a two year period in the city of Philadelphia (87) nearly equaled all of the state of California (101) despite a population in Philadelphia which is a mere fraction of my new state. [2]

In the academic sector, which is heavily dependent on research funding as well as clinical practice, an additional challenge has been the cutback in NIH funding over the last 5 years. The success rate of RO1 grants, the lifeline of new investigators, decreased dramatically in the middle of this decade from as high as 20% to less then 10% and headed down.[3] In constant dollars, the purchasing power of the awards has decreased considerably (>10%) even if total dollars awarded has been slightly higher. [4]

These changes have had a negative impact on physician morale in many practice environments including academic medical centers which are hardly the protected "ivory towers" of myth. A recent survey of nearly 2000 full time physicians and basic scientists at four representative medical schools unearthed significant depressive symptoms in about 20% of those surveyed. [5] Overall, surgeons had higher anxiety and depression scores then internists and anesthesiologists although orthopedic surgeons were apparently blissfully immune with the lowest stress of all specialties. A most troubling finding for the future was the fact that anxiety and depression scores were higher in physicians and scientists less then 35 years of age then in senior colleagues 56 to 65 years of age.

The personal toll of these stressors is also reflected in other measures of physician health maintenance and mental health. One-third of American doctors have no regular personal physician and the suicide risk in physicians is considerably higher then the overall population. [6, 7] One study noted that male physicians have a risk twice control while the suicide risk in female physicians is nearly three times control. Given the uniformity of the challenges in medical practice in many Western economies, a more regimented health care system doesn't seem to make much difference in lowering stress. In a survey published in 1995, 62% of Canadian physicians complained about an excessive workload and 55% noted the stress it placed on their family and personal lives. [8] In appears that too many of today's physicians might characterize their existence as Woody Allen once did: "Life is full of misery, loneliness and suffering – and it's all over much too soon**."**

When so caught up in the daily challenges of our time, it seems an appropriate time to step back and re-examine two timeless philosophical questions: what produces a happy life and, most importantly, can we meaningfully influence our happiness by our attitudes and actions? In this search, we can benchmark to the considerable and detailed research into happiness over the last 20 years. It must be acknowledged that while this work incorporates such highly quantitative fields as economics and sociology, the measurement of happiness is, in its core, subjective in nature. The methodology is frequently based on large surveys or intrusive intermittent daily sampling and can be flawed by linguistic and attitudinal differences across cultures. Still, a surprising consistency is found across much of the published work and it is undeniable that the influence of this research on marketing, politics and alike is growing.

Definitions of happiness run from the whimsical ("My advice to you is not to inquire why or whither, but just enjoy your ice cream while it's on your plate," Thornton Wilder) to the cynical ("Happiness is an agreeable sensation arising from contemplating the misery of another," Ambrose Bierce). What passes as a relevant academic definition was advanced by Martin Seligman who defined the principle elements of happiness as positive emotion, engagement, satisfaction and meaning. [9]

Irrespective of how we define it, the proportion of people at each level of happiness is relatively steady across time. In the Pew Foundation's annual surveys of Americans from 1972 through 2004, the percentage of respondents characterizing themselves as "very happy," "pretty happy" and "not too happy" was remarkably consistent across the 30 years (see figure 1). [10] At all times

80-90 % of people said they were “very happy” or “pretty happy” while 10 - 15% were “not too happy.”

The link between money and happiness is complicated and must be considered on both a national and personal level. Despite three-fold increases in real income per person in the United States between 1945 and 2000, the percentage of the population describing themselves as “very happy” in one study was consistent at approximately 30% over 45 years of observation. [11] In another view of the same time period, mean life satisfaction was rock steady at about 7 of a 10 point scale while adjusted gross national product (GNP) tripled. [12] Indeed the relationship between a given country’s GNP per capita and the life satisfaction of its citizens is now well known. It can be characterized by a steep increase in happiness as a low level GNP increases with little further improvement in happiness once a modest GNP is reached.(see figure 2). [12]

This failure of additional societal wealth to increase happiness has stimulated much discussion and debate amongst economists. Easterlin advanced two likely mechanisms for this paradox. [13] The favored aspiration adjustment hypothesis argues that happiness levels off because, as soon as a society acquires some moderate amount of wealth, expectations for quality of life are raised even more. An inability to reach those expectations quickly leads to disillusionment and tempered spirits. This phenomenon has also been termed “the hedonic treadmill” since harder work and enhanced economic gains bring little increased satisfaction.

The alternative but related relative position hypothesis is based on the social hierarchy. Irrespective of how much additional income a country experiences, there is always a gradient

between the richest and poorest citizens. This relative deprivation maintains a similar and consistent differential in the level of contentment between classes. I have frequently experienced this phenomenon in Los Angeles when I am stopped at a traffic light between a Ferarri and Bentley, too often driven by 25 year olds!

In contrast to the societal experience, it is clear that, most of the time, happiness in an individual does increase with higher income. In the Pew survey, the relationship between family income and happiness was linear and progressive between incomes of $20,000 and $100,000 with a doubling in the percentage considering themselves "very happy" at the highest income level (48% vs 23%).[10] This does not seem to be a localized phenomenon; the United States and Great Britain demonstrate very similar distributions of happiness.[11] When citizens in the top quartile of income are compared to those in the bottom quartile, the wealthy are more likely then the poor to be "very happy" (US rich 45% vs poor 33%; GB rich 40% vs poor 29%) and less likely to be "unhappy" (US rich 4% vs poor 14%; GB rich 6% vs poor 12%). It is telling that, irrespective of income, more then 85 % of all residents in both countries consider themselves "quite happy" at the least. This resilience of spirit is consistent with the observation that there are essentially no differences in life satisfaction between Forbes magazine "richest Americans," Maasai tribesmen and Pennsylvania Dutch farmers.[14]

Along with the evidence that how much money we make has an impact on happiness, there is accumulating data that how we spend our money is even more important. In a fascinating series of social experiments published in *Science* this year, Dunn and colleagues found that prosocial spending (gifts, charity) made people happier then spending on personal items; furthermore, this

effect was evident irrespective of the amount of money spent. [16] Indeed, gifting even small amounts to friends, family or charity greatly enhanced personal satisfaction and these effects persisted for more then 6 weeks.

It is logical that our personal and social relationships have a positive effect on our happiness; that said, the power of these effects is impressive. Despite the unlimited volume of humor generated at its expense, a sustained marriage (good, bad or indifferent in quality) is perhaps the single best predictor of happiness. Whether male or female, married people in the United Stated are nearly twice as likely to describe themselves as happy than those who are divorced, separated or never married. [10] Further, marriage has equally powerful effects on mortality. In a recent study from Great Britain, considering survival over a seven year period, the mortality of married men was 7.2% lower then unmarried men. [16] While the mortality benefit in women was slightly less impressive (reduction of 4.1%), it was still highly significant. Being married also attenuated the adverse effects of low income on mortality. Among those in the lowest quartile for income, unmarried people experienced an 8.5% increase in mortality while the married poor had mortality rates only 4.6% higher then the mean. Finally, life satisfaction has been shown to decline dramatically whether the spouse is lost to death or divorce and does not return to previous levels for at least 5 years.

It should be inspiring to many of us that age is generally associated with a small but measurable increase in happiness. [17] To explain, Blanchflower and Oswald advance the uncomplicated but resonating argument that as people get older most adapt to their personal circumstances, relinquish irrational expectations and simply enjoy life more. [18] This is particularly true if one is

fortunate enough to have a life partner and experience generally good health. Predictably, those with fair or poor health consistently trail their more robust age-matched peers. It must be acknowledged that personally perceived health status is known to be quite subjective and there is considerable evidence that attitude is more influential on life style and mortality then objective measures of health per se.

In a now famous study of 941 people aged 65 to 85 years, Giltay and colleagues assessed cardiovascular and other risk factors and used a detailed questionnaire to separate the subjects into quartiles based on their disposition (optimistic vs pessimistic). [19] Even after appropriate stratification for health measures, mortality over nine years of observation was highly correlated with the degree of optimism. For example, 70% of the most optimistic men lived nine years while only 40% of the least optimistic survived the same interval.

Further support for this effect is provided by data from the so-called "Nun study," most recently analyzed by Dunner et al. [20] Investigators had access to handwritten autobiographies of 180 nuns prepared when they entered their convents beginning in 1930. Entries were blindly coded for emotional content (i.e. positive, neutral or negative in tone). All cause mortality was tracked late in their lives over a 10 year period. A positive attitude, expressed early in life, was a clear marker for greater longevity. Taken together these studies strongly suggest that optimism and positivity have measurable physiologic benefits and likely reflect "hard wired" personal characteristics evident early in life.

It is appropriate that we consider what situational obstacles might defeat our maintenance of such an optimistic view of life. One of the most obvious places to look might be the hectic pace of life in general and especially that associated with the delivery of health care. In most surveys of full time workers in the western world, those in the United Kingdom and United States work the longest hours by far. In 2002, one study documented that US workers exceeded the hours worked by those in Europe worker by 25% with mean hours of 2000 per year (about 40 hours per week) in comparison to 1700 per year (about 30 hours per week). [21] I think we might agree that we know few surgeons – residents or attendings - who wouldn't exceed those numbers substantially. The Pew studies show conclusively that a hectic pace, associated with long hours and overlapping activities, clearly and adversely impacts personal satisfaction. In their most recent survey, only 27% of people who felt they were always rushed in daily life described themselves as "very happy" as compared to 42% who almost never felt rushed. [10]

In one sense, this feeling of "rushing around," which could be defined as urgency without importance, is unfortunately the single defining characteristic of many of our lives. Whether we are frantically thumbing our Blackberries or mesmerized by CNN, I would argue that we too often spend our time on details and urgencies that lack much meaning. To avoid this treadmill, prominent psychologist and my former University of Chicago colleague, Mihaly Csikszentimihalyi prescribed a more purposeful ideal for our lifestyle which he calls "flow." [22]

Flow is characterized by complete immersion in a complex activity which is intrinsically motivated by our own talents and interests. Relevant to today's discussion, the initial observations of this phenomenon were made in surgeons, athletes and musicians who train for

years to reach the high level of skill necessary for superior performance. In detailed interviews, all described a similar sense of clarity, serenity and even ecstasy when purposefully engaged in the most challenging and difficult activities. While flow shares some surface characteristics with other urgent tasks, it is elevated by the matching of hard-won skills and innate talents with a meaningful and noble purpose. Csikszentimihalyi argues that true happiness is found in those who can find a way to maximize the time they are "in flow" in their personal and professional lives.

This brings us full circle to the most difficult part of the discussion today: what, if anything, can we do to achieve happiness in the challenging lives we live? What modifications of attitudes and behaviors will better support this quest?

Throughout his academic career, Herzberg wrestled with the factors that contribute to happiness in work environments. He divided elements of personal satisfaction into **extrinsic rewards** such as salary and administrative titles and **intrinsic rewards** such as improvements in the nature of work, achievement, recognition and personal growth. [23] In his field work, it appeared that the relationship between income and happiness (extrinsic rewards) followed Easterlin's "hedonic treadmill" pattern. Increases in compensation from a low base initially had an highly positive relationship to personal satisfaction; but, once a relatively high level of compensation was reached, further increases in salary had little effect. In contrast, workers in a wide range of professional and non-professional jobs reported progressive increases in satisfaction as the nature of the work became more rewarding on an experiential basis (intrinsic rewards). As later outlined by Warr, these improvements in the job environment included opportunities for greater personal

control of working conditions, a chance to use a wide range of skills in a variety of tasks, supportive interpersonal relationships and the articulation of clear requirements coupled with the ability to meet them. [24]

Based on my experience, I clearly believe that these observations are pertinent to our jobs as physicians and surgeons. When I served as Chair at the University of Chicago, I had the great good fortune to work closely with Harry Davis, who is a senior Professor in the Graduate School of Business. Among other things, Harry is interested in the motivations of professionals and spent considerable time assisting our department. In preparing for one of our yearly retreats, I asked him to meet with a wide range of our faculty to get an independent sense of their enthusiasms and concerns. He scheduled 30 minute interviews with about 20 faculty members at all academic levels. As you might predict, not a single interview was finished in the time allotted. Given relative anonymity, they went on a bit about their likes and dislikes of their jobs and the environment.

In putting it all together, Harry Davis was struck by the strong positives and negatives which were, at times, expressed nearly simultaneously. In one sense, the glass was “half full”; faculty members were committed to the academic mission, relished their personal autonomy and found great personal satisfaction in their teaching and clinical activities. Still, the same people also described areas of significant dissatisfaction (the “half empty” glass). They bemoaned what they saw as a “culture of expendability” in which their contributions might be valued during their tenure but would be inevitably forgotten with their replacement. They also described a mentality which Professor Davis termed “shattered dreams.” They felt they had studied long and hard in

college and medical school and worked tirelessly during residency and the early part of their practice only to be faced with diminished authority within the healthcare system. In short, no amount of extrinsic rewards could adequately balance this decreased personal control of their time and activities.

For several years, I kept an index card with Professor Davis' findings on my desk and referred to it whenever dealing with dissatisfied colleagues. I was impressed with how often their specific complaints could be explained by the one of the mechanisms he described and how frequently the path to resolving their issues began with acknowledging and addressing these frustrations.

I have found one truth in my dealings with a wide range of physicians from Chicago to Los Angeles. The more we can allow doctors to perform their most valued services unimpeded – in the office, in the laboratory and, most importantly, in the operating room – the happier they will be. The effects on personal satisfaction are far more powerful and long-lasting then increasing their take home pay. As simply but eloquently stated by Brown and Gunderman "to increase fulfillment of physicians, we need to ensure that the intrinsically fulfilling aspects of work are accentuated not suppressed." [25] This can only be done by enabling physicians to exert responsible local leadership and linking them to a strong network of motivated colleagues

The value of this approach is well supported by the literature. Coyle and colleagues surveyed a large number of general internists and found that autonomy and professional relationships contributed more to satisfaction then compensation or advancement. [26] In Freeborn's survey of Kaiser-Permanente physicians, the greatest positive impact was gained from improved control

over their environment and social support from colleagues.[27] The assets we marshal from our lives outside of medicine are also critical to our pursuit of happiness in our jobs. In one study of primary care physicians, the greatest contributors to professional stability were personal relationships at home, spirituality or religious observance, and the maintenance of balance and optimism.[28]

In closing, whether at work or home, it seems clear that the "good life" cannot be gained without the satisfying personal relationships we establish with others. The zen master of "flow," Csikszentimihalyi was asked to select the four key ingredients for a happy life.[29] He enumerated good genes, an extroverted personality, a happy marriage and good friends. Acknowledging that, for the time being at least, changing the hereditary component is beyond our control, I think you would agree that his conclusions ring true. The ability to reach out to others, to enjoy and nurture both intimate and social relationships, is the essential element that gives our lives the staying power to handle the challenges of work or fate. In the end, the answer to our question this morning is really quite simple. If "the secret of the care of the patient is in caring for the patient" then the secret to a happy life is caring for others.

In that sense, we come full circle – back to the importance of the Western Surgical Association and our fellowship today. The sustaining value of this organization doubtless lives equally in the spirited discussions in our scientific sessions as well as those far less formal interactions over a glass of wine or three. The long-standing practices of this organization to chose desirable venues and enhance our meetings with other activities of interest is one way we ensure that the personal

ties we so value are strengthened. Our choice to attend this meeting is a perfect illustration of how we can influence our own happiness – enriching our knowledge while sharing with good friends the wonderous experience of life, with all its rewards and challenges. These may be "little things" but as well said by Robert Brault **"**Enjoy the little things….one day you may look back and realize they were the big things."

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445 Legends

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447 Figure 1

448 Self-assessed levels of happiness in the United States from 1972 to 2004.

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450 Figure 2

451 Relationship between gross domestic product (GDP) per capita in many countries and the life

452 satisfaction of residents.