

Personality, Lifestyle, and Death

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In the history of mankind, it is difficult to find a topic more ancient than death and dying. This topic has persistently occupied the thoughts of philosophers, theologians, scientist, and most certainly the average human being. Scientific investigation of this topic did not begin in earnest until the mid-1950's for reasons yet open to conjecture. Certainly, the Freudian notion that we cannot accept our own mortality since we cannot "know" death has provided a quick and convenient rationale for skirting the issue (Freud, 1915, 1917). The idea that we cannot "know" death is also found in the writings of the eminent suicidologist Edwin Shneidman who wrote that people can only "know" death as one experiences the death of another, or as one anticipates it for himself (1973). The latter is what Shneidman calls "knowledge through the Postself"; the current anticipation of what the world will be like when the person is absent from it and how his fame, reputation, and impact will be perceived. The Postself may be inscribed in: a. the memories of others; b. the stimulation of the works and deeds of others through one's own works; c. the bodies of others through organ transplantation; d. the genes of one's progeny and e. the cosmos as part of the universe. According to Shneidman, if one could experience death directly, one would not be dead! This attitude toward death has helped foster the reputation of our society as death-defying and death-denying. It can be clearly seen in Judeo-Christian beliefs that stress eternal life even if corporeal existence is ephemeral, and in the euphemistic verbalizations that refer to death as expiration, being deceased, passing away, and in the usual device of avoiding reference to the term death altogether for fear that such usage may actualize it. Death-denying and defying is also conspicuous in the practices of physicians and other "healing" professionals where new life-extending techniques abound in a seemingly vain attempt to prevent (or at least postpone) what no person can.

Given that we live in a death-denying society, a death awareness movement has been counterposed in an attempt to deal directly with a human concern for the plight of the dying person. One of the basic tenets of this movement maintains that since death is inevitable, it would be counterproductive to deny it. In fact, it would be more humane and therapeutic to prepare for it. Moreover, the imminence of death can be assuaged if the individual is permitted to die appropriately. Weisman (1972) defined "appropriate death" as "one in which there is reduction of conflict, compatibility with the ego ideal, continuity of significant relationships, and consummation of prevailing wishes." In short, an "appropriate death" is one which a person might choose for himself had he an option. It is not merely conclusive; it is consummatory. An "appropriate death" is as painless as possible to the individual, his postself, and significant others in his life. Undoubtedly, the most popularized position on "appropriate death" is that of Elizabeth Kubler-Ross whose work On Death and Dying (1969) is considered by many to be one of the first and most important in the humanistic death awareness movement.

Kubler-Ross contends that there are five stages of dying from a psychological perspective. At points along this process, appropriate psychiatric interventions are implemented toward the end of acceptance. Generally, those working with the dying person try to be as open as possible about death in a manner that is considerate of the person's plight and his ability to assimilate information. If one operates under the assumption that on some level the person "knows" he is dying, how the information is presented and how the person may maneuver it is an important concern. Basically, people hear what they want to hear in a way that is consistent with their current orientation to the world. The five stages of dying can be outlined as follows:

1. Denial - a basic refusal to believe that he is dying despite overwhelming medical evidence.
2. Anger - person begins to face reality and angrily questions why it had to happen to him.
3. Bargaining - patient is looking for ways to buy more time or effect some trade-off or compromise.
4. Depression - person desponds because of the realization that death is imminent and bargaining is unrealistic.
5. Acceptance - is reached when the person realistically appraises that he has done everything possible and now - "so be it". This stage is beyond affect since the reasons for negative emotional response have been worked through.

While the goal of treating the dying person with dignity may be served by Kubler-Ross, Shneidman (1973) echoes common criticisms that while dying people may be seen bargaining, depressed, and denying, that is not proof that there are stages of dying nor that they are experienced in that order or in any universal order. Shneidman (1973) and Weisman (1972) are more inclined to view the dying process as an ebb and flow or waxing and waning of disbelief and hope, denial and acceptance. Others have leveled criticisms stating that the "stage theory" does not consider the significance of the preterminal personality and other life history factors in addition to other peculiar situational determinants such as the actual disease process and the nature of treatment (Kastenbaum and Costa, 1977). "Stage theory" may in fact be divorced from the context of the person's past and present life. The greatest danger may lie in the conversion of an untestable theory into a recipe for perfect or desirable death.

Side-by-side with the death awareness movement is an apparently contrary movement based on the idea that death and dying are the culmination of the effects of particular personalities and lifestyles (P/LS) on physiological integrity. If death and dying can be attributed to P/LS, it follows that people contribute to their own demise. If P/LS can produce demise, then it is conceivable that people can learn to change those variables and thereby defy death. Therefore, at issue is whether psychological factors, i.e., emotions, perceived stress, cognitions, attitudes and behavioral propensities can contribute to-physical disease, dying and ultimately death. If so, what premorbid characteristics might be predictive?; is there scientific evidence to support this position?; how can knowledge of such factors be translated into a therapeutic regimen either in prevention or secondary and tertiary treatment?; is it ethical to encourage death-defying

especially in light of the death-awareness movement? The remainder of this chapter will be devoted to the exploration of these questions.

ⁱUse of the pronouns "he" and "his" are not intended to be discriminatory. It is a matter of habit and writing comfort.

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PHILOSOPHICAL NOTIONS AND HOLISTIC MEDICINE

Western thought has been influenced by the Cartesian dualism of mind and body which views mind and body as distinct entities each "knowing" a different reality. The body can only "know" physical reality while the mind can only "know" metaphysical reality. Certainly, the mind can "know" of the body and vice versa, but neither can "know" of the other in the same way that each "knows" of itself. This line of reasoning has fostered a dichotomous view of human nature as evidenced by language which reserves different terms to denote the different entities; mind and body. It is clearly demonstrated in the way in which certain sciences are segregated. Physicians investigate physical disease and tend to view and thus treat people as mechanical entities while psychologists investigate mental realities and tend to see people in terms of intangibles such as thoughts, feelings, and personality traits.² Unfortunately, too many physicians tend to ignore the potential role of P/LS in physical disease while too many psychologists tend to ignore the contributions of physical factors in understanding "mental" functioning.

Despite the perceived segregation of mind and body in Western thought, it is commonly held that mind does interact with body and despite the lack of substantial medical evidence people often perceive their physical condition as deriving from psychological forces. Such people also tend to see their "cure" as being partially dependent on "taming" these psychological forces. These views have crystallized in the Holistic Medicine movement which holds that an individual's condition results from the fine interplay of psychological and physiological factors in a reciprocal manner. Any attempt to explain or treat disease in terms that fail to consider the person as a whole functioning organism would be deficient. In his book, Mind as Healer, Mind as Slayer (1977) Kenneth Pelletier contends that "all disorders are psychosomatic in the sense that both mind and body are involved in their etiology. Any disorder is created out of a complex interaction of social factors, physical and psychological stress, the personality of the individual subjected to these influences and the inability of the individual to adapt adequately to pressures. Once illness is viewed as a complex interaction of these factors, then it is possible to view symptom as an early indication of excessive strain upon the mind-body system. (Pelletier, 1977, P. 13).

- This is not to say the psychologists have not also adopted a mechanical model of mind; many have.

The Holistic approach is the cornerstone of an emergent field called Behavioral Medicine, an interesting interdisciplinary approach encompassing the behavioral and biological sciences united to the goal of understanding, predicting and treating disease. A necessary ingredient of the behavioral approach to treatment is the concept of self-control. In strict behavioral terms, a person does not "have self-control in the sense of some internal trait. He learns it. Stated more broadly, if a person learned a maladaptive lifestyle, and it is that lifestyle that has contributed to disease, then the person may learn more adaptive coping skills and thereby prevent or ameliorate disease. Rather than accept death, the individual in recognition of his own contribution to the dying process, may learn to defy death. This fits nicely with a recently advanced notion by Bandura, a cognitively-oriented therapist, that the common denominator of effective psychotherapy is a sense of "self-efficacy". This refers to the expectation a person develops that he not only knows what to do to get better but also knows that he possesses the wherewithal to perform the necessary behaviors (Bandura, 1977). Bandura makes the point that most patients either know what to do in order to produce certain favorable outcomes or at least can recognize the possible utility of the therapist's advice. However, change does not occur until the person believes he has developed the skills necessary.

Finally, I would like to point out that the recognition of psychological factors in the etiology of physical disease is also expressed in the official nosological system of the American Psychiatric Association (APA-DSM-III, 1980). The DSM-III allows for diagnoses of "Psychological Factors Affecting Physical Condition". Here, the diagnostician can specify a particular disease such as ulcer, migraine, hypertension, tachycardia, etc., considered by clinical and experimental evidence to be symptomatic of maladaptive mind-body interactions.

RESEARCH RELATING P/LS AND DISEASES

Certainly all lifestyles terminate in death and many of those who die have succumbed to disease. It is possible that how and when people die may be traceable to particular personality characteristics and lifestyles. Intuitively this idea is sensible, yet most scientific attempts have failed to clarify the precise cause and effect relationships necessary to unequivocally make a point. Among the numerous stumbling blocks to scientific verification, one is salient. Most studies attempting to link psychological factors to disease are retrospective in design. The researchers assemble a sample of diseased individuals and then assess past and present P/LS in the hope of discovering a connection. The retrospective approach is nearly analogous to fishing. Just as the fisherman casts a bait-laden hook into the lake hoping to catch a fish, the retrospective researcher observes the diseased and dying person and hopes to disentangle the multitude of possible etiologic factors in a "sea" of possibilities. Such research is relatively risk-free in the sense that the researcher need not necessarily make any specific predictions. It is easy to make claims after the fact. However, it is nearly impossible to determine cause and effect. What the researcher is usually left with is a disease state, dying patients and speculations regarding associations among possible etiologic factors. The researcher may in fact be looking at factors related to other variables not being observed or the cognitive emotional by-products of disease. The possible solution resides in identifying some of the more strongly associated factors and then observing their presence in the premorbid personality as predictors of future disease states. This is a prospective study; difficult to conduct, time consuming, but definitely in order.

One example of how this has been employed is in the study of Coronary Heart Disease (CHD). It is well known that CHD (angina pectoris, myocardial infarction, hypertension, congestive heart failure, etc.) can be crippling and deadly, afflicting roughly 3% of American adults past the age of 30. While numerous factors such as smoking, diet, lack of exercise and genetics have been implicated in CHD etiology, it has been suggested that P/LS plays an important developmental role. Friedman and Rosenman, two San Francisco cardiologists, began to study this relationship in the 1950's and 1960's and in 1974, published Type A Behavior and Your Heart, wherein they identified the prospective CHD patient as suffering from time urgency, impatience, ambition, competitiveness, and unrecognized hostility. Subsequently, such adjectives as aggressive, dominant, quick-thinking, self-confident, autonomous, extroverted, changeable, and adventurous were added (Chesney, et al., 1981). The Type-B person presents the opposite characteristics. Several prospective studies have apparently confirmed the connection (Chesney, et al., 1981). While flaws in the research methodology render the connection hazy, it is clear that the P/LS characteristics outlined do play some causal role even if not an all-determining one. Identification of these characteristics is important not only from a descriptive-predictive point of view, but also as target variables for psychotherapeutic interventions. One particular problem in using this knowledge to devise a treatment program is that the Type-A person is not likely to see himself as having a problem and therefore not likely to seek treatment.

P/LS AND SUICIDE

Suicide presents the clearest example of how P/LS produce death. But what about deaths that invite psychological explanation? I am specifically referring to cases in which the mode of death is equivocal. For economic, political and legal reasons beyond the purview of this chapter, deaths are typically classified as Natural (N), Accidental (A), Suicide (S), or Homicide (H); hence the NASH designation according to Shneidman (1973). However, the cause of death certified on a Death Certificate does not always provide specific information regarding the mode of death and in roughly 10-15% of all cases, the mode of death is equivocal due to paucity of information, an inadequate psychological investigation or both. This is painfully obvious in trying to ascertain suicide vs. accident but equally curious in cases of natural death if P/LS contribute to one's demise. For example, if a person is found dead in a fire, death may be accidental. But it could be a homicide at the hands of an arsonist. More boggling is the possibility that the person set the blaze intentionally, in which case it could be a suicide! Even if no conscious process could be deduced, can we rule out the possibility of a subintentioned inclination to die which in turn was manifested in poor judgment and carelessness with flammable items? As another example which integrates the previous discussion with CHD, might not the Type-A personality be affecting his own demise through some intentional or sub-intentional proclivity? The principal shortcoming of official death certifications of death is that they fail to specify intention. A boy who drowns in a pool may have been rushed, may have jumped, or may have been careless. A precise certification depends on assessment of intent; a monumental task considering that the prime source of information -- the deceased -is dead!

Since the HASH designation is basically Cartesian in nature, one must appeal to other approaches. One such approach is the "Psychological Autopsy" which reconstructs the role played by the deceased in his own death (Shneidman, 1969). Before describing the "Psychological Autopsy", an analysis of intention is necessary. Shneidman (1973) contends that in order to fathom the concept of death and intention one must recognize the contrary emotions that people experience simultaneously; pleasure-pain, love-hate, wish-fear, life-death -- ambivalence. As Shneidman puts it, "One can swallow a pill, genuinely wishing to die, and at the same time, hope for rescue" (Shneidman, 1973, P. 82). While the concept of ambivalence is fundamental to Psychodynamic theory, one need not subscribe to the Freudian concepts of life and death instincts, libido, or death wish. Ambivalence might be easily reconceptualized in a number of ways and still retain its essence. The point is that people may, to varying degrees, knowingly and unknowingly, contribute to their own demise.

Shneidman distinguishes several personality types where intention is reasonably clear (1973). There is the:

1. Death-Seeker - who consciously behaves in such a way as to bring about his death. Method is irrelevant. What matters is that the person single-mindedly behaves in a way that makes it nearly impossible for people to save him. Tomorrow he may actively resist death, but today he actively seeks it.

2. Death-Initiator - who knows that his days are numbered or that he is deteriorating and cannot live with that.

3. Death-Ignorer (transcender) who believes that after he terminates his life by suicide he will continue to exist in some other way such as in the afterlife.

4. Death-Darer - who essentially is playing "Russian Roulette" with his life. This person engages in "dare-devil" activities where he stands a low probability of surviving because of a lack of skill necessary; to succeed. This person is "flirting with death".

Of course, most deaths are not suicides, coming; as a result of violence or natural causes and as far as the individual is concerned, they are unintentional in that the person was not consciously trying to kill himself. With unintentional deaths there is the:

1. Death-Welcomer - who after a long incapacitating illness welcomes the relief that death brings.

2. Death-Postponer - who hopes it will not come some time soon and does what is possible to delay it.

3. Death-Accepter - who has resigned himself to death.

4. Death-Disdainer - who momentarily contemplates death yet believes he is beyond any involvement in the death process.

5. Death-Fearer- Who is almost phobic about death or any reference to it.

6. Death-Feigner- Who cries "Wolf" for the purpose of manipulating others.

Shneidman (1973) also talks of subintention -- an unconscious motive to kill oneself evidenced by poor judgment, imprudence, high sensation-seeking and risk-taking, personal neglect and abuse such as drug and alcohol taking. Subintention may play a significant role in all four of the NASH categories. Shneidman also views "voodoo deaths", unexplained hospital deaths, and sudden deaths in apparently healthy individuals as attributable to subintention. He also cites accidental death in "accident-prone" people and "victim-precipitated" homicide as suggestive of subintention. Clearly, "accident-prone" is a contradiction in terms implying a personal involvement in the "accidental"

event. In "victim-precipitated" homicide, it is powerfully suggested again that the person did something to provoke the homicidal event although there may be no conscious awareness of intent. People who drive recklessly, abuse drugs, frequent crime-beleaguered neighborhoods, or provoke aggressive behaviors in others seem to invite death. Shneidman identifies the following personality types:

1. Death-Chancer -_who gambles with death. He is more likely to die than the Death-Darer because he requires significantly greater odds that he will live. His life is left to chance.

2. Death-Hastener -_who unconsciously brings about death by irritating an existing abnormal physiological condition through bodily abuse and/or mismanagement.

3. Death-Facilitator -_who does not resist death. By passively succumbing to his condition, he makes it easy for death to occur. In this regard, Seligman's "learned helplessness" model is relevant (1975). According to Seligman, depression results when an individual believes that he no longer has any control over what happens to him. He has learned from experience that he is ineffectual and that the locus of control has shifted to agents in the external world, rendering the person helpless and his future hopeless. Even when the opportunity to remedy one's situation exists, the person does not respond owing to his negative cognitive set. The person may then lose his will to live, thereby facilitating death. Farber (1968) has presented a similar view in which he construes suicide as a "disease of hope". According to the hypotheses, suicides are committed by people who are psychologically damaged and confronted by a deprivation situation. Suicide (S) is a function (f) of vulnerability (V) and deprivations (D); $S=f(VD)$. This is consistent with certain Behavioral conceptions of depression which hypothesize that depression results from a reduction of positively reinforcing behaviors (Ferster, 1965, 1973; Lewinsohn, 1974) or a reduction in reinforcer effectiveness (Costello, 1972). In either case there is a perceived sense of hopelessness and helplessness which may result in the loss of the will to live.

4. Death-Capitulator -_who through fear of death arouses strong emotions that affect his demise.

5. Death-Experimenter -_who lives on the edge of death by subintentionally wishing for a permanently altered state of consciousness. This person experiments with drugs and alcohol, always running the risk of converting his altered state into coma and death. This type of death is usually considered to be accidental.

THE PSYCHOLOGICAL AUTOPSY

Since many deaths are equivocal with regard to mode, it is necessary to retrospectively assess P/LS with the "Psychological Autopsy". Data to be included would be:

1. Identifying information for the victim (name, age, address, marital status, religious practices, occupation, etc.).

2. Details of death (cause, method, etc.).

3. Historical information (sibs, marriage, medical illnesses, medical and psychotherapy, suicidal attempts or gestures).

4. Death history of victim's family (suicides, cancer, other fatal illnesses, age at death).

5. Description of personality and lifestyle.

6. Victim's characteristic reactions to stress.

7. Any recent upsets, pressures, tensions, or anticipations of trouble.

8. Role of alcohol or drugs in a) overall lifestyle b) death.

9. Nature of victim's interpersonal relationships.

10. Fantasies, dreams, cognitions, premonitions or fears relating to death, accident or suicide.

11. Before death changes in habits, hobbies, sexual pattern or other life routines.

12. information about upswings, successes, plans.

13. assessment of intention.

14. Rating of lethality, i.e., intent to die in terms of low, medium, or high.

15. Reaction of informants to victim's death (Shneidman, 1969, 1973).

Such a retrospective account may then be pooled with other "Psychological Autopsies" in the hope of finding predictors of future suicide. While Suicidology is far from an exact science, the information culled from such a procedure may yet prove useful in identifying lifestyles of persons who are at risk.

P/LS AND CANCER

The main thread drawn through this entire chapter is that people contribute to their own demise and in keeping with our death-denying attitude I will present evidence to show that P/LS may contribute to the incidence, course, and treatment of cancer. It is not at all unreasonable that the "Psychological Autopsy" and corresponding death-types defined by Shneidman can be applied to "natural deaths" resulting from cancer and disease in general. One of the more celebrated cases involving psychosomatic disease is the account of Norman Cousins (1976). In 1964, Cousins developed a comprehensive, degenerative collagen disorder called Ankylosing Spondylitis. He experienced extreme difficulty in initiating movement, nodules appeared under the skin, and his jaws nearly locked. He was informed that his chances of recovery were, at best, 1 in 500. Through discussions with medical specialists and his own reading, Cousins formed the hypothesis that his condition probably resulted from heavy-metal poisoning interacting with a predisposing lowered resistance to bodily insult. He presumed that his lowered resistance was "adrenal exhaustion" owing to his laborious stressful work demands. He reasoned that his cure required a restoration of normal adrenal functioning. With the supervision of a rather open-minded physician, Cousins' therapeutic regimen consisted of mega-doses of vitamin C and positive emotions. If stress and negative emotions contributed to the illness, it was reasonable to assume that positive emotions would contribute to his recovery. This facet of therapy involved a positive attitude, the will to live, hope, faith, and watching episodes of "Candid Camera". Slowly but surely, Cousins' condition went into remission and he fully recovered. According to Cousins, the prime ingredient was his belief that he could and would get better; something that was more than an abstraction but rather a physiological reality.

Cousins' account has been harshly criticized recently by the sociologist F. A. Ruderman. It is her contention that the diagnosis was never certain and that the disease may have been nothing more than an acute attack of arthritis which subsided spontaneously (Holden, 1981). Ruderman continues that Cousins arbitrarily cited scientific references that bolstered his preconceived notions just as he arbitrarily traced the etiology of his disease. More serious is Ruderman's contention that Cousins offered no proof that his therapeutic regimen was responsible for his cure. In the long run she believes that his account and the curious laudatory response of the medical community will injure the doctor-patient relationship.

More recently, O. Carl and Stephanie Matthews-Simonton have presented evidence that positive mental imagery can be incorporated into a therapeutic regimen for terminally ill cancer patients. The Simontons first became interested in imaging in 1969 when Carl Simonton, a radiation oncologist, heard a prominent immunologist express the idea that cancer was due in part to a breakdown in

immunocompetence. To treat his leukemic patients, the immunologist extracted abnormal white cells and applied them to the skin in the hope of summoning the body's natural defenses. Remission was higher than with more traditional techniques prompting Simonton to look more closely at the possible factors responsible. After researching the area, Simonton arrived at the tentative conclusion that the best predictor of successful treatment was a positive attitude toward the treatment regimen and life in general. Moreover, the beliefs of the patient's family, significant others and physicians are positively correlated with positive treatment outcome. Following the notion that one's beliefs limit one's perceptions of reality and possibility, Simonton began to explore the ways in which he could change the attitudes of dying people who were depressed, unaccepted, and overwhelmed by their plight. The course of therapy must also be attuned to particular psychological factors that the Simontons believe are etiologic in cancer (1978). "Those predisposing factors most agreed upon as (negative) personality characteristics of the cancer patient are:

1. a great tendency to hold resentment and a marked inability to forgive;
2. a tendency toward self-pity;
3. a poor ability to develop and maintain meaningful long-term relationships;
4. a very poor self image.

In the majority of cases the person has lost a significant loved one."

The Simonton plan involves 4 steps. First, the individual goes through a period of orientation in which he is encouraged to bring friends and relatives to the clinic where they will be introduced to the concepts of stress reduction, meditation, visualization and the notion that physical disease represents the complex interplay of P/LS and physical factors. The patient is introduced to the idea that to some extent, physical integrity is compromised by unrelieved psychological tensions so that in a sense, the person has contributed to his illness. Later, therapy attempts to capitalize on the logic that if a person has helped produce his condition, he can also help ameliorate it. In the second phase, the person is instructed in visualization and imagery exercises and instructed to read "The Will to Live" by Arnold Hutschneker (1953). For those patients who do return (approximately 50%), the third stage involves group therapy sessions every day for 5 days. The content of these sessions deals with imagery exercises concerning psychosocial factors and lifestyle changes. The fourth stage finds the patient leaving the clinic to return home and practice what has been learned in the prior 3 stages. Patients commit themselves to one year of treatment and return every 3 months for 3 days of intensive group sessions. It should be noted that the Simonton approach requires that the patient continue to participate in the prescribed medical treatment plan which may consist of radiation and chemotherapy.

Since imagery is central to both the efficacy of this approach and some of the controversies surrounding it, I would like to describe the technique in some detail.

First, patients are taught a simplified form of autogenic training which involves deep muscle relaxation induced by autosuggestion (Pelletier, 1977, 1979). The person subvocally repeats the word "relax" while passively focusing on a tense body part. Through proper training and practice, the person learns to release tensions on cue. Once relaxation is induced, the individual is asked to visualize a peaceful scene, thus enhancing psychological tranquility. Next the person is asked to visualize the illness in whatever form it may appear to him, then visualize the medical therapy attacking and conquering the disease. The precise content of the imagery is less important than the theme: treatment conquering disease. Thus, treatment may be visualized as bullets are showering a hamburger or voracious sharks (lymphocytes) attacking feeble grey fish (cancer cells).

Achterberg and Lawliss (1978) have formulated a test called IMAGE-CA which assembles patients' subjective reports and scores them in order to provide clinicians with a method of understanding the role patients play in their treatment. The administration of IMAGE-CA in conjunction with a battery of other psychodiagnostic tests shows that the psychological factors outlined by the Simontons (1975) are better predictors of treatment outcome than other medical analyses. Basically, the procedure involves asking patients to go through relaxation exercises while focusing on subjective cancer imagery. Then they are asked to draw the images. Fourteen factors were subjected to standardization. They are "vividness, activity and strength of cancer cell; vividness and activity of white blood cell; relative comparison of size and numbers of cancer and white cells; vividness and effectiveness of medical treatment; degree of symbolism; overall strength of imagery, regularity of imagery process; and clinical opinion related to prognosis, based on imagery factors" (Achterberg and Lawliss, 1978). Common elements of imagery that are predictive of good prognosis are images that included "white knights", "Vikings", and large powerful animals such as dogs and bears aggressively assaulting cancer cells. Those who saw white blood cells as more vivid than cancer cells had a better prognosis than those who saw the cancer cells as being more vivid.

To date, the Simonton's claim to have extended the life expectancies of approximately 100 patients judged to have less than a year to live. Average survival time is approximately 20 months. Of the 63 still surviving, 22.2% had no evidence of disease while 19% were in remission. Despite these apparently impressive data, the Simontons have been beset by criticisms on both scientific and ethical grounds. Let us assume for the moment that the results do speak favorably for their approach and the idea that P/LS are etiological factors in cancer. What is the mind-body connection that might account for these findings?

While the psychophysiological mechanisms are sketchy at best, one line of research suggests compromised immunocompetence. The hypothalamus, an important element in the neural and hormonal control of emotionality and systemic physiology, receives stress input via cortical pathways. This triggers sympathetic arousal via descending nerve pathways. The net result is the mobilization of bodily

resources appropriate to the classic fight or flight reaction. Among the numerous physiological concomitants it seems that the secretion of stress hormones (epinephrine and norepinephrine from the adrenal medulla are crucial in maintaining a positive feedback loop accelerating the already accelerated hypothalamic influence. When stress cannot be diminished, the hypothalamus hormonally influences the pituitary to secrete ACTH (adrenocorticotrophic hormone), which in turn stimulates the adrenal cortex to secrete glucocorticoids and steroids, which have the effect of resisting a variety of stressors and maintaining physiological processes while paradoxically suppressing the body's immune response. Research by Solomon at Stanford (1969) and Stein, Schiavi and Camerino at Mt. Sinai School of Medicine (1976) suggests that while the influences are certainly multifactorial, one important element seems to be the linkage between the hypothalamus and thymus gland which functions in the surveillance of microorganisms and antibody production. Any compromise of thymus functioning should negatively influence thymus integrity, thereby suppressing the immune response. The result could be cancer. Numerous studies with lab mice show that when the hypothalamus is lesioned, thymus activity is inhibited, rendering the animal susceptible to certain forms of cancer (Solomon, 1969; Amkraut and Solomon, 1975). Recent research by Riley (1975, 1961) has shown that environmentally induced stress in lab mice leads to a breakdown in immunological apparatus and a greater risk of cancer. Keller, et al. (1981), has also provided evidence in mice that lymphocyte production can be suppressed by subjecting animals to a graded series of stressors.

ADDITIONAL STUDIES RELATING P/LS TO CANCER

The work of the Simonton's and Achterberg and Lawliss is appealing because it is consistent with a death-defying movement which overlaps with the so-called "self-help" movement which burgeoned in the 1970's. The credo is that since each person has virtually unlimited potential, he can cure himself if only he could find a way to tap his powers. One way would be to adopt a positive attitude. This idea is pleasing but impossible to verify. The sobering alternative is to assume that man is a powerless pawn of nature. Perhaps the important point is that what one perceives to be real is reality for that person. If in fact the Simonton approach is nothing more than placebo, still the patient is more concerned that he is getting better than he is about satisfying the scientific curiosity geared toward determining why he is getting better. I will present criticisms to the Simonton approach in a later section. I would now like to present other data bearing on the relationship between F.LS and cancer. It would be virtually impossible to review the multitude of factors that have been implicated, and the numerous studies that are relevant. In addition, most of the studies are seriously flawed methodologically, making data interpretation risky. Therefore, it may be more instructive to focus on research areas, and then spend some time on the more methodologically sound studies. For a thorough account of research trends and future possibilities in this area, the interested

reader is urged to consult Fox (1978). Much of the forthcoming information has been derived from this source and a complete list of references can be found therein.

Some studies address personality factors, both stable and emerging, while the majority of studies address transient or long-term life events, hypothesizing that the stress resulting from particular experiences increases one's susceptibility to cancer. In these studies, cancer is considered to be the result of immunosuppression. Other studies focus on personality factors that are reflective of greater reactivity to stressors again by immunosuppression. This third type of study conceptually blends personality and life-stress factors. Many of these studies adopt a psychodynamic stance by explaining cancer development in terms of denied form of disease in a particular organ system. Such people show a poor outlet for emotional discharge, reduced aggressive expression, and diminished introspection into their emotional difficulties. Most show depression, apathy, and a sense of hopelessness. Such findings are not unlike those observed by the Simontons.

Study of the relationship between stress and disease began in earnest with the work of Selye (see 1974). Evidence has proliferated that stressful occupations, job situations and other life changes are associated with a greater incidence of disease in general. Holmes and Rahe (1967) have attempted to assess the relationship between psychosocial stress and disease by having subjects rate the impact of 43 events on their lives. Impact scores are assigned and the subjects are followed for a period of time. Generally speaking, higher impact scores are associated with a higher future disease incidence. When this approach is applied to cancer, the results are contradictory, showing as many negatives as positives and making one wonder about how well life-stress can predict cancer. There are simply not enough data to infer causation.

Many of the social stresses that have been implicated in the causation of mental illness have also been suspected in the etiology of cancer. Some putative factors are: insecurity, poverty, loss of social status, social isolation, work role incompatibility, loss of self-esteem, disrupted family situations, and social change. However, one prospective study of "neurotics" discharged from the army in 1944-45 demonstrated that these people showed no greater incidence of cancer 24 years later than control subjects (Keehn, 1974). Kissen (1966) found no differences in neuroticism between lung cancer patients and other hospitalized patients.

In studying the relationship between social stress and cancer, particular types of stressor have been observed. Meares (1975) has expressed the view that the dominance-subordination factor may be critical with submission increasing vulnerability to psychosomatic disease in general. It is conceivable that long-term frustrations in marriage, child-rearing, and job may fulfill one of the more important criteria for a carcinogen; long-term stimuli acting as promoters of cancer development. Appropriate to this notion is the finding that male and female stomach cancer had a shift toward lower androgen-estrogen ratios and a reduced rate of baldness also predicted by androgen-estrogen levels (Wakisaka, et al., 1972). Abse, et al. (1974) found that men in his cancer group were hypoassertive. These findings are in line with Seligman's notion of

"learned helplessness" mentioned previously and may be consistent with Lazarus' notion that being able to anticipate events or stressors even if one cannot control them is a form of symbolic coping. It might be predicted that if stress can induce cancer, being able to cope should reduce the risk. Is this, in fact, what the Simonton's have accomplished?

REVIEW OF IMPORTANT PROSPECTIVE STUDIES

Thomas and Duszynski (1974) prospectively studied 1337 Johns Hopkins medical students between 1948-1964, by having each subject complete a questionnaire concerning family attitudes as perceived by the subject. Three family attitude scales were derived: closeness-to-parents, emotional demonstratives, and matriarchal dominance. Five disordered groups were then defined: suicide, mental illness, hypertension, malignant tumor, coronary occlusion. The most impressive finding was that the suicide, tumor, and mental illness groups scored very low on the closeness-to-parents scale indicating a perceived lack of closeness to parents. The relationship was most powerful for the tumor group suffering from several types of cancer such as leukemia, seminoma, basal cell carcinoma, lymphoma, melanoma, carcinoma of the pancreas and astrocytoma. In this study every negative family attitude was more common in the tumor group than in any other. Negativity was also inferred from failure to check positive attitudes. Some of the positive attitudes rarely checked were: companionable, warm, understanding, steady, admirable, confiding, comfortable, and congenial. Some of the negative attitudes were: detached, unpredictable, dislike, rebellious, hurt, and disagreeing. Thomas and Buszynski view these findings as consistent with many of the interpretations thus far presented. LeShan (1966) has hypothesized that early in life a child's ability to relate to others is damaged resulting in feelings of isolation, and the expectation that relationships bring pain and rejection and a sense of hopelessness and helplessness. Later, when considerable emotional energy is invested in a meaningful relationship, and then the relationship dissolves due to the death of a spouse, loss of a job, or a child leaving home, the sense of despair resurfaces. This hypothesis is virtually identical to the concept of "anaclitic depression" espoused by many psychodynamicists

CRITICISM OF SIMONTON APPROACH AND P/LS RESEARCH

In a previous section I somewhat uncritically presented the work of the Simontons. However, the reactions of the scientific community have not been favorable and in many cases have been downright disdainful. Let us review some of the criticisms of the Simonton approach and PILS research. Despite the convictions of the Simontons, no consistent personality profile has been found that would allow us to talk of cancer-types. The profiles described in this chapter could be indicative of any number of psychosomatic disorders. Moreover, the profiles have often been deduced from people already suffering from cancer making it entirely possible that cause and effect have been misconstrued. I will elaborate. Early cancer affects the patient both by his awareness of having the disease, and through physiological changes resulting from complications, surgery or chemotherapy. In advanced stages there is often pain and debilitating psychological disequilibrium due to one's knowledge of his condition and the disruption of his life. There are also endocrinopathies resulting in the secretion of hormones with actions similar to ACTH, epinephrine, cortisol, parathormone and insulin. Some cancers produce encephalopathy which along with endocrine dysfunctions may produce the oft-seen psychiatric symptoms of anxiety, depression, disorientation, memory impairment, depressed intellectual functioning, and mood disturbances. Davies (1973) found that, even though the clinical picture showing an apathetic giving-up syndrome correlated with the loss of significant loved one, it also correlated with greater physical illness, hematological disturbances and reduced sleep. Loss did not correlate with tumor. Nehemiah and Sifneos (1970) described a psychological condition associated with certain illnesses in which the patient finds it difficult to use language to express emotions and engage in emotional fantasy. The authors have posited a neuroanatomical break between neocortex, the locus of language, and paleocortex, the locus of emotionality. In light of our previous discussion of P/LS factors as etiologic, the following question now becomes very interesting. Are we looking at psychosomatic cancer where P/LS produce disease or are the connection somatopsychic, where the disease and its psychophysiological concomitants and byproducts lead to the psychological and behavioral effects?

In conclusion to this section it can be said that there are differences between cancer and non-cancer patients. But considering the state of science that is probably all we can safely state.

Numerous studies have shown connections between P/LS and hormones, but few have drawn a link to cancer. Other studies have shown that the immune system can be affected by altering the activity of particular brain regions, but it has also been shown that the immune system plays a limited role in inhibiting or promoting cancer. Immunological deficiencies can produce a variety of cancers but rarely are they the most common types: lung, breast, colon (Fox, 1978). Cancers of the Immune system are more likely. In short, a causal link among stress, immunosuppression and cancer has not been satisfactorily demonstrated. This casts a shadow on the Simonton approach and the whole area of cancer and immunosuppression.

If the above criticisms were not enough, others include unsuccessful attempts of others to replicate Simonton's finding, the absence of adequate control groups, and inappropriate statistical analyses. In defense, I wish to address some of these criticisms. While scientific proof should be required, such proof would be difficult, if not impossible to come by. It would require massive prospective studies wherein subjects without evidence of neoplasm are carefully studied and assessed physically and psychologically over many years. Whom would we get to participate in this study? Who would submit to the constant intrusion necessary to adequately explore the problem? The task would be monumental.

On the issue of replication, nobody would argue the need for replication; yet it is well known that researchers tend to find what they would hope and need to find rather than what is the case. This is easy to understand when job, money, reputation, one's career are on the line. In general, the medical profession has always tried to deflect outsiders from muscling in on their territory. Besides, medical science (and probably all science) is somewhat resistant to change, especially when there are assaults on time-honored methods and when these assaults emanate from sources outside of that science. In the case developed here, imagery has never found a place in traditional western medical science.

Sampling, assignment of subjects to one group or another and control are always an area vulnerable to criticism. Assuming that sampling procedures were adequate, we would yet run into the ethical consideration of withholding treatment from roughly half of our subjects (controls). If in fact the treatment does appear to be sound, we would be faced with the dilemma of having to satisfy the demands of scientific rigor while forsaking those who may have been helped.

Regarding studies showing no increase in risk factor among patients whose immunocompetence has been surgically compromised, and the observations that high-stressed individuals do not always show an increased incidence of cancer, I would like to state that while these are valid criticisms that must be faced, they are by no means clearly indicative of a flaw in the Simonton approach. Since there is no evidence that we can equate psychological and physiological parameters across studies, comparisons become risky. If the holistic approach has any merit, one could argue that if disease is multifactorial then no single factor by itself is capable of producing any condition. Accordingly, stress per se produces nothing.

Finally, most of the research showing a link between stress and disease has been conducted with lab mice. I trust that the reader realizes the problems inherent in extrapolating from animals to humans. Many cancer researchers argue that animal cancers are in many ways not like human cancers. Riley has made the following rejoinder. "Although it may be hazardous to extrapolate biological findings from mice to other species, it would be equally imprudent to ignore the many physiological similarities and analogous biochemical relationships that evolutionary biologists have demonstrated in animals belonging to the same phyla. The fundamental biological principles that are further delineated through the study of animal models may be expected to have

application to man" (Riley, 1981). I guess we must be careful not to throw out the baby with the bath water.

Other criticisms not directly based on methodological flaws state that the Simonton method is analogous to medieval evangelism in which sin has been replaced by depression, denial and redemption, placing it in the vein of the self-help movement of the '60's and '70's. Many are appalled that the Simontons are committing a cruel fraud by playing a game called "blame the patient". It is enough that the patient is suffering, dying, and blaming himself already. What he needs least is another slap in the face. Even if patients accept their role in the production of their illness, they will develop an illusion of mastery that will be shattered at the moment of truth (Scarf, 1980).

What will become of the Simonton method is unknown. One factor bearing on future appeal is the burden of scientific proof in a world where statistics speak loudest. Pelletier (1977) discusses a statement by Simonton regarding the issue of scientific proof in which Simonton tells of a psychiatrist who was using an unorthodox approach in the treatment of schizophrenia. Under pressures from colleagues to substantiate the efficacy of his approach, the psychiatrist organized a symposium of prominent scientists to deal with the question of what constitutes scientific proof. One response was particularly interesting. The letter stated that "the question is much too difficult for me" and went on to state that "I couldn't be of much help". The letter was signed "Albert Einstein".

Regarding the issue of ethics, it seems that the Simonton approach will be viewed more favorably if it proves to work. The more scientifically sounds the method, the more ethical it will be to utilize it within limits. Scientific proof is not the only, nor should it be the only, consideration. As with most medical and psychotherapeutic interventions, the price one pays in the hope of reaping greater rewards is a sticky problem. One only has to look at recently publicized treatments such as laetrile for cancer, marijuana for the side effects of chemotherapy, amphetamines for obesity and psychosurgery for intractable psychiatric disorders. Does the end justify the means? What initially starts out as a scientific issue ultimately becomes a legal, political, ethical, economic and sociological issue involving physicians, patients, lawyers, clergy, drug companies, politicians, civic groups ... ad nauseam.

Simonton's attitude is that considering the condition of the patients, it is worth a try. The Simonton method is clearly controversial but it seems that controversy is only generated when matters are not clearly black or white. If the method were either as "terrible" or "effective" the opposing parties claim, controversy would not exist.

In conclusion, elucidation of the relationships among P/LS, cancer and dying will require much more than an attempt at scientific corroboration. What is needed is a cognitive shift or change in mind-set that will permit a fresh look at the problem from the holistic viewpoint. For many involved in research, this may prove difficult if not impossible, since for a variety of reasons people tend to become cognitively stale and unable to reconceptualize. The possibility exists that there is no significant relationship among the

variables discussed. However, that determination cannot be made until more data are accumulated. It seems as though even data may be of little help if those data continue to be viewed through the same pair of tinted glasses. Knowledge often comes from technological advances. But it also comes from changing one's glasses.

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