

A LIFELONG EXPLORATION OF THE STREAM OF CONSCIOUSNESS

Jerome L. Singer

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My intention in this paper will be to point out how some of my early childhood experiences directed my interests toward studying psychology and, more specifically, the stream of consciousness and daydreams. I will describe some earlier experiences and influences which established a readiness to commit myself to a career in a field I had no inkling of before I began attending the City College of New York at age 16 in 1940. It was just a year after the death of Sigmund Freud, a person unknown to me until friends at the college told me of his theories and encouraged me to take courses in psychology. My first formal course in psychology opened up the possibilities of research and soon the brilliant integrative lectures of Gardner Murphy and my exposure to the writings of William James and Kurt Lewin, led me to consider studying human consciousness through scientific methods. My wide reading of literature, poetry, and the dramas of the ancient Greeks and Shakespeare all fed my curiosity about imaginative thought.

My enlistment in the military during World War II and subsequent service as a Special Agent in the Counterintelligence Corps of the Army in New Guinea, the Philippine Islands, and, at the war's end, in the early phase of occupied Japan, offered valuable life experience but no opportunity for formal study of psychology for several years. On my return to civilian life at the age of 22, I was concerned (having grown up in the Great Depression) that a teaching and research field like psychology offered little opportunity to "make a decent living". I went so far as using my military experience in the Pacific theatre, my knowledge of the Chinese and Japanese languages acquired in the Service, and my intelligence work with "exotic" civilian populations to apply to graduate programs in International Relations like Yale's. At the urging of close friends, I was also accepted at Harvard Law School for a legal career like the one they were pursuing. Yet the more I thought about it, the more I was drawn back to psychology. I saw an announcement of the Veterans Administration Clinical Psychology Training Program which offered wide-ranging research and clinical practice opportunities along with, for those times, decent financial aid. It seemed just what I wanted. I managed to turn in an application on the last possible day by taking the train to Philadelphia and going straight to the Psychology Department of the University of Pennsylvania. My four years of intensive study and research at Penn (where the world's first Psychological Clinic had been set up in 1896) and at the new V.A. Mental Hygiene Clinic in downtown Philadelphia were very fulfilling. Although the study of consciousness and imagination was not a special field of interest to the Penn faculty, my emerging plan for a career of research in that area was respected by the professors and by a number of my fellow students. Of greater influence were my

associations with Dr. Sheldon Korchin, a VA Clinic Staff member and recent Harvard graduate, and his former mentor, Silvan Tomkins, one of psychology's true geniuses, just then moving from Harvard to a professorship at Princeton. They became my lifetime friends and supporters of my research. During the same period I met and married Dorothy, my wife now for more than 60 years, so that my time in Graduate School was one of the happiest I have experienced.

Family Background and Socio-Cultural Context

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Both my parents, who were cousins, came from two closely connected Austrian-Jewish families. They arrived in America in childhood as part of what I later on learned has been described as the great Galician-Jewish emigration of 1890-1914 from the Austro-Hungarian Empire. My maternal grandfather, Mordecai Burg, was described to me as a leader in the relocation of literally hundreds of relatives and neighbors whom he assisted with housing and employment on their arrival in America. He headed a large Burial Society formed by these immigrants to New York City.

My Grandfather

Some of my earliest memories are of my grandfather Mordecai Burg, a tall, white-bearded, kindly man, very loving and playful. I recall that he built a little wagon in which he could pull me around in his apartment or, outside, in the green Crotona Park just across the street. I also recall him often seated at a long table reading from the scriptures or commentaries, or else writing. We later found that he wrote mystical poetry in Hebrew.

My grandfather was most impressive when each year he sat at the head of the long table conducting the Passover Seder or ceremonial feast with the whole family and some friends. He wore long white robes and had all the manner of some high priest. For me, as a three or four year old, he seemed like an image of our deity. Years later when I first saw reproductions of Michelangelo's famous Sistine Chapel ceiling portrait of God creating Adam, I realized that God closely resembled my grandfather whose large portrait hung in my parents' apartment.

My Parents

Once arrived in America, my family showed little nostalgia for rural East Europe. My parents, Yetta and Abraham, spoke unaccented English. During the Depression my father worked at his factory every day of the week and so was rarely home until his work schedule eased after World War II.

An outspoken non-believer, my father nevertheless enjoyed Jewish religious rituals, especially the chanting and singing. Music of all kinds but especially classical symphonies and operas were tremendously important to him. He told me often of his visits in the early 1920s to the Metropolitan Opera with his brothers or with my mother to hear the great tenors, especially Enrico Caruso.

I saw very little of my father after our family's prosperous years in the 1920s because of his desperately heavy work schedule during the Great Depression. My love

and respect for him derived from retrospection and understanding of his broad liberal views, his determined work ethic, his pride in his technical competence as a cutter and pattern-maker in the women's dress industry, his low-keyed warm sense of humor, family commitment, and shared appreciation of classical music. When I was somewhat older in middle childhood we took late night strolls on the oceanside boardwalk of Brighton Beach. Occasionally he expressed concern that I was overprotected and coddled by my mother and even wondered if I might be better off attending a military school. Fortunately, he never pressed the matter.

My relationship with my mother, especially in my early school years, was far more complex. Having arrived in America as a very young child in the first decade of the 1900s, she was completely educated in New York City schools, completing Washington Irving High School and attending Hunter College. As long as I can remember and throughout her long life of 96 years, she continued to express regret over her uncompleted education. She was thoroughly "Americanized" and, actually, one could also say she was an Anglophile. She owned an impressively-printed complete set of the novels of George Eliot. She insisted my English language name should be Jerome after the British comic novelist, Jerome K. Jerome. It was pretty obvious to me as a little boy and to our large extended family, that all of her hopes centered on my fulfilling her frustrated education ambitions. This great need for education which she then inculcated in me can be exemplified in one of my very earliest childhood memories from about ages 2 or 3 of my mother singing me a lullaby about a little schoolhouse where a fire burned on the hearth and the school master taught the children their alphabet. She also taught me to sing "Twinkle, Twinkle, Little Star" not only in English but, more pretentiously, in Latin: "Mica, Mica, parva stella..." Her interest in music culminating in taking me to the Metropolitan Opera (Standing Room) for my thirteenth birthday set the pattern for my love of opera.

In the last decade of her life she often said that one of the happiest days of her life was her attendance at the Yale University Graduate School Commencement where I sat on the stage at Woolsey Hall with other professors in our academic robes, and her grandson, my son Jeff, marched up to receive his Ph.D. diploma.

If anything remains of the facet of my early childhood in which my mother trained me to do recitations and to be the page boy at weddings, it is that I was always comfortable in public speaking. In elementary school I was regularly chosen to be the announcer at school plays or public performances. I began writing plays in the fifth grade and would announce them but not act in them when they were regularly produced throughout my years in elementary school. While I never developed a theatrical career it was an easy transition to become a college professor and also to give talks at professional meetings.

One of the most common memories was of my hovering in the background while my mother listened sympathetically to daily recountings of trouble from bill collectors or neighbors. I even recall one instance when a family acquaintance, a man I

would now recognize as being in an agitated depressive state, suddenly brushed me aside and made a dash to throw himself from our 4th story window only to be caught from behind and calmed down by my mother. Is it any wonder that my younger sister and I grew up to be psychotherapists?

Other Family Members

Two important influences in my years between 5 and 13 were my Uncle Oscar, my father's youngest brother, and my orphaned first cousin on my mother's side, Arthur. Oscar, a lawyer and Bible teacher, had a fine collection of books. We had many good talks. He had also been an Army Officer and I saw him occasionally in dress uniform wearing a shiny long sword. He represented a combination of athleticism, masculinity, and intellectualism that meant a lot to me. Shortly before his death at age 98, I had occasion to speak with my Uncle Oscar by telephone. He spontaneously mentioned remembering how he watched my frequent games of pretend play during the year we lived in the same apartment in Brighton Beach.

My cousin Arthur also played a continuing beneficial role, encouraging my reading by buying secondhand books or borrowing them for me from circulating libraries. We began with adventure books like the Edgar Rice Burroughs' Tarzan of the Apes series or the John Carter of Mars series, eventually going on to more "literary" books like the Sherlock Holmes stories, James Branch Cabell's *Jurgen*, Sinclair Lewis' *Arrowsmith*, Upton Sinclair's *Roman Holiday*, and many others with liberal, mildly socialist slants.

When I was quite young I worked the Tarzan stories into my private make-believe play. Soon I also found I could tell the other boys on the street some of the Tarzan stories and build them into our games so that for a few years I was nicknamed "Tarzan" among our gang. I realize now how certain facets of my personality emerged in fantasy mentation. My heroes took on a particular intellectual shape in addition to their physical prowess. The Tarzan I imagined was not the inarticulate, boorish, sometimes bumbling ape-man portrayed in the Hollywood movies by Johnny Weissmuller but the sophisticated, linguistically gifted Lord Greystoke of the Edgar Rice Burroughs novels. Before long as I read more widely, my idol became Sherlock Holmes, the super-intelligent detective.

Many of the happiest memories of my childhood are associated with the increasingly elaborate games of make-believe I engaged in, often in private but publicly as well with friends. My parents seemed quite indulgent of my solitary play, accompanied at ages 3-5 with vocalized conversations and sound effects. The themes involved knights in armor since my visits to the library had given me a chance to see well-illustrated accounts of the adventures of King Arthur and his companions of the Round Table. I also created fantasy athletes, mostly baseball, football, or boxing superstars whose games or fights I acted out vigorously with just a few props.

This mix of intellectuality and heroics became a resource for me in some periods of potential discomfort in school. I remember a few occasions in the 3rd and 4th

grades when a teacher enforced a group punishment such as silently marching the class in line up and down the indoor steps. I developed a mental escape by pretending that I was a secret agent, spying on the group but not really a part of it. This notion of being a spy was also reinforced by the fact that in the “gang” conflicts that occurred between the boys of 7th, 6th, and 5th Streets in Brighton Beach, I, as a relative newcomer on 5th Street, had been selected as the kid to spy on the “evil” 6th Street gang and to negotiate an alliance with the 7th Street boys. How curious that somehow I ended up being assigned in my real military service to becoming a Special Agent in Counterintelligence? And, eventually, is not psychology practice often seen as a form of detective work?

One further expression of pretend play took the form of actually developing playlets and acting in them with another boy my own age who lived in the same apartment building in Brighton Beach. Bernard and I both had much younger sisters. We began to put on little shows for the girls and some other neighbor kids. We chose Sherlock Holmes stories. Since Bernie actually owned a deerstalker cap and rather more resembled the illustrations of Sherlock Holmes, he took that part exclusively. I was relegated to playing Doctor Watson or the sinister Doctor Moriarity and even the Hound of the Baskervilles. Our shows were quite popular with the children. Again, it is curious that each of us, friends now for more than 80 years, has had a son who became a successful script writer in Hollywood.

In my early teen-age years I formed good friendships with a group of boys who shared intellectual interests. When we could, we traveled by subway to “Downtown” New York City to see inexpensive plays. We also made evening excursions to watch trials in New York’s Night Court. Once we had entered college, our group began to think of forming a club. I believe it was my mother, thrilled to hear of this development, who suggested “Live’n’Learn” as the club name. She offered our apartment for our first Friday evening meeting. I was then taking a course in General Science and I was very excited about the scientific method and research. I gave a lecture on Astronomy which was very well received. Our meetings continued regularly for three years at which point almost all of us entered the military.

Military Service

Perhaps the most distressing experiences came with my being called up for active duty a year after my enlistment in the Army in the difficult years of World War II. I can never forget the scene at the railroad station as a group of us, including some of my closest childhood friends, said goodbye to families. I remember my friend Jim Sack telling me that he saw my father, who had seemed to be upbeat and smiling for most of the farewell period, going off by himself to a corner to weep profusely.

My early months in basic training were difficult and stressful. Fortunately, I was about average in physical and military competence for our training cohort so I never became the butt of either sadistic sergeants or the peer group’s bullying. After basic training at Fort Hood, Texas, I was tested for language skills and then went on for

army-directed college training in Chinese. Three of us were selected to go on to the military intelligence school located in a secret Maryland mountain camp which has since evolved into the Presidential Retreat, Camp David. My subsequent actual combat zone experience fortunately was free of any extreme personal trauma. During my overseas years in New Guinea, the Philippine Islands, and in Occupied Japan, the special nature of my counterintelligence work and my quasi-secret status as a Special Agent protected me from many of the more serious dangers other soldiers were facing. My childhood friend, Bernie, who used to put on the Sherlock Holmes plays with me back in our Brighton Beach apartment house, was also in the Counterintelligence Corps although not in the same areas of the islands. In actuality, I believe we did our counterintelligence duties well enough. We both found that we could handle practical duties reasonably competently even though we were generally much younger than the other intelligence agents.

Professional Career

As someone who in personal and professional life has been so caught up with introversive issues, our stream of thought, dreams, daydreams, and the private dimension of human experience, I have always confronted a persisting conflict. Could I ever do anything practical? The field of clinical psychology was especially appealing to me because I believed that conducting psychotherapy was probably my best shot at being a truly “real world” contributor. I won’t claim that philosophically such therapeutic work which I carried on for more than 50 years is truly more practical than university teaching or psychological research. I can’t deny that for me the sense of *doing something*, since I didn’t seem to be able to build machines or fix cars, guided my efforts to apply psychology through helping emotionally-distressed persons.

Safely returned in March 1946 from my military service in World War II and starting in graduate studies at the University of Pennsylvania that fall, I developed the beginnings of my research program on daydreaming and the ongoing human imagination. My first postdoctoral position as Director of Research at the recently opened Franklin D. Roosevelt Veterans Hospital gave me a remarkable opportunity to set up research studies that combined my theoretical interests with studies of psychopathology in this large mental hospital. The research I published in the next five years attracted attention so that, when I left the V.A. to go into full-time clinical practice, I was also invited by the Chair of Clinical Psychology at Columbia University, to set up a laboratory at Teachers College and also to serve as a Teaching Affiliate in their graduate program. I was during this same period one of the very few psychologists who had been admitted to psychoanalytic training which was in those years limited to physicians. Although my practice on 5th Avenue across from the Metropolitan Museum of Art provided the financial security that well exceeded my fears dating to my Depression-era upbringing, I eventually realized that the increasing complexity of my research program and its demands on my time better warranted a regular university

position. I found that I was at this point sufficiently in demand by graduate departments in New York and California that I could begin my academic career as a tenured Full Professor. I went to my old Alma Mater, City College, where I became Director of their Clinical Psychology Program and in a few years also Director of their Center for Research in Cognition and Affect with laboratories at CCNY in Harlem and at the City University Graduate Center. In a few years my research was really thriving and I had the opportunity to bring along my brilliant Columbia University collaborator and former assistant, John Antrobus, to the faculty as well as to arrange for a series of full professorship hirings including, among others, Stanley Milgram from Yale. Not long afterwards I was approached by Donald Taylor, then Chair of Psychology at Yale and soon afterwards Dean of Yale's Graduate School, about joining Yale's faculty. I turned this offer down. A few years later I thought better of the offer and accepted, becoming the Director of the Graduate Program in Clinical Psychology, and it has been a very happy and fulfilling nearly 40 years since.

The Research Program on Daydreaming and Stimulus-Independent Thought

In some of his early writings Sigmund Freud suggested that one's imaginative thoughts and fantasies were ways in which both children and adults were able to use such "trial actions" to restrain impulsive actions and, in effect, to regulate their behavior. In my graduate school days I began to wonder if one could find ways to study daydreams scientifically. Reviewing the literature I found that, compared with night dreams, practically no significant research had explored daydreams or waking imaginative thought systematically or experimentally. I developed the first research program to test Freud's speculations and to place daydreaming within the context of research on human cognition and motivation.

Delaying-Capacity and Imaginative Thought

Working with some collaborators in the late 1940s, we designed research that found, for example, that persons who did obtain test scores suggesting a fairly rich fantasy life compared with others who lacked evidence of such imagination were able to control their movements and impulsive behaviors. For example, those with a rich fantasy life were able to write a phrase extremely slowly or sit quietly in a room without restlessness while awaiting an interview. A colleague found that when told to restrain from imitation while listening to a very infectious laughter recording, the high fantasy participants could hold out better. In my Research Directorship at the V.A. Hospital, I continued this work with the cooperation of mental patients as well as staff members. Similar results were found among these patients with the more imaginative individuals also displaying less overt unwarranted physical aggression. I also obtained similar results in studies with normal children. Those who showed more evidence of richer fantasy lives were more able to restrain impulsive actions.

Psychometric Assessments of Individual Differences in Frequency and Patterns of Daydreaming

A first step was to develop an operational definition of daydreaming as a specific mental aspect of simple mind wandering and distractability. Mind wandering is the more

general term involving shifts of attention away from immediate tasks or processing of newly presented information. The specific form of mind wandering called daydreaming includes engaging in personal memories, fantasies, glosses about significant events, intrusions of thoughts reflecting current concerns or unfinished business, a shift into narrative thinking not immediately relevant to one's ongoing activity or chore. The daydream involves the creation of a temporary virtual reality. One phase of our research emphasized developing interview techniques and especially questionnaires which we could use with large numbers of adults from both genders, various age groups, and cultural or socioeconomic variations. We used sophisticated statistical and psychometric methodologies which were soon also adopted by others in this research area.

Many people are aware of their daydreams and consciously and reliably report them on the questionnaires. It can also be shown that these self-reports have reasonable degrees of construct validity. Persons who score as showing more daydreaming tendencies are also more likely to show such patterns when they are examined systematically under laboratory conditions.

Our questionnaire studies have indicated consistently the widespread nature of daydreaming and the likelihood that it emerges as a kind of default brain process when our attention to external stimulation is reduced. Most people report that they are especially likely to drift into daydreaming when they shut their eyes and relax their limbs as they prepare for sleep. It is also likely that many times when we are performing over-learned or very repetitive tasks we seem to go into an "automatic pilot" state and may be able to sustain both daydreaming and overt tasks like walking down the street or even shopping. Think of the literary examples of Virginia Woolf's Mrs. Dalloway or James Joyce's Stephen Daedalus and Leopold Bloom. Our early efforts to study brain processes confirming the default system were limited by technology in the earlier days of our research. Very recent studies by others reflecting the great advances in brain imaging procedures have tended to confirm my proposals concerning the default system dating as early as the 1960s.

Laboratory Studies on Ongoing Thought: Stimulus-Independent mentation during Task-Performance or Resting States

In the late 1950s, John Antrobus and I began to use a carefully controlled procedure based on so-called vigilance and signal detection research. With a person sitting in a sound and light-proof booth for an hour rewarded for detecting rapidly presented sound or light signals, we examined shifts of attention from the accurate signal detections to more personal mentations while still accurately performing the experimental task. Researchers in this field call these Stimulus-Independent Thoughts (SITs) and we have also accepted the acronym referring to these reports as TUITs (Task-Unrelated Images and Thoughts), a suggestive term because of the link to "intuition".

In dozens of studies we have found that individuals persist in producing task irrelevant thoughts and daydreams. Even if one concedes the relative artificiality of the laboratory procedure, one cannot avoid the recognition that ongoing conscious

thoughts are persistent, intrusive, and ubiquitous and can operate sequentially or in parallel with task performance. Of importance is that people who report more frequent daydreaming on questionnaires actually produce more TUITs than do low-daydream reporters on questionnaires.

Naturalistic Studies of Ongoing Thought During Ordinary Daily Activities

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In order to move beyond the laboratory strictures we have carried out a number of studies which involve having individuals carry around a paging device while going about their daily activities. This pager signals randomly during the day, at which point the participants in the study fill out a brief questionnaire they are carrying, reporting what thoughts they just had, what activities they were just engaged in, and their current emotional state. Findings from this growing and intriguing body of research demonstrate that one can actually conduct useful studies to determine the ways in which ongoing thoughts reflect a person's emotional state, physical health, and recent or long-standing unfulfilled intentions.

Experimental Studies of the Contingent Role of Motivations and Emotions on Stimulus-Independent Thought.

By using a scoring method for what are defined as "current concerns" or continuing unfulfilled intentions, it is possible to estimate from thought sampling the relative importance of intentions and to establish a personally-significant hierarchy of such intentions or the degree to which the intentions are relatively recently formed rather than related to earlier life experiences. Both "current concerns" and unresolved longstanding conflicts play a leading role in our thoughts. These recent and more extended unresolved intentions or concerns recur particularly in our consciousness in the so-called "default" conditions when we are not actively trying to do complex mental or physical work and problem-solving. They also influence night dream content as shown by results obtained in sleep laboratory experiments.

Imagery and Daydreams in Psychotherapy

As a practicing psychotherapist over many years I began to look for ways in which my research program related to direct clinical work. This led into both scholarly reviews and direct research on the role of imagery representations or daydream-like phenomena in various forms of psychoanalysis and cognitive and behavior therapies. Our work in this area suggests that a patient's ability to formulate quasi-perceptual images and relatively concrete mental representations can be extremely useful in almost every type of "talk therapy". I have published articles and books demonstrating how such phenomena are identifiable and can even be fostered in all of the major psychotherapies.

Childhood Origins of Daydreaming and the Influences of Adults, Reading, and the Electronic Media

I began this presentation with examples of my own memories of parental influences on my childhood pretend play and early imaginative development. As it turned out, Dorothy Singer had a similar set of experiences of parental influences on her early child-

hood play. We decided in 1970 to collaborate for the first time on how pretend play in preschoolers might be a forerunner of the later flowering of imagination in adolescents and adults. We began to examine the earliest forms of pretend play in childhood, the occurrence of imaginary playmates, various forms of make-believe play manifested in the day-care center or nursery school and we have also considered the implications of individual differences in imaginative play. We sought to determine whether pretend play is largely a manifestation of early neurotic difficulties, as some have proposed, or whether it can be viewed as a manifestation of a healthy adaptive development.

Our hundreds of observations as well as the formal research studies we and others have conducted attest to the fact that imaginative play in childhood is developmentally adaptive. Pretend play is associated with consistent evidence of smiling, laughing, and satisfaction in the children who engage in such behavior. Make-believe games are also associated with greater language skill, self-regulation, reality-fantasy distinction and later creative thought.

In a variety of studies we also examined how adults (parents and grandparents) reading to children, telling stories, and tolerating or encouraging pretending games may influence constructive play. This led us also to look at other influences beginning with television-viewing. We conducted a series of investigations of children's shows like *Mister Rogers' Neighborhood*, *Sesame Street*, *Barney and Friends* related to children's play. We also followed children over time to see how the quantity and type of viewing affected not only play but overt aggressive behavior, moods, and learning opportunities. These studies attracted much attention. In 1976 with support from the National Science Foundation we set up the Yale Family Television Research and Consultation Center. This led to much research and consultations with educators, parents, U.S. government agencies and Congress. More recently we have moved into examining the newer electronic influences such as videogames and computers. We have recently completed and published a study of children's pastimes and play in 16 countries, England, France, the United States, Portugal, Brazil, Argentina, Turkey, South Africa, Indonesia, China, India, Vietnam, Morocco,. We're in the midst now of a further study of children's outdoor play and attitudes towards nature in 11 countries.

A Personal Anecdote of Daydreaming, Night Dreaming and Current Concerns

In the intensity of the 2008 presidential election, a *New Yorker* magazine cover featured a satiric representation of Barack Obama and his wife in costumes and settings satirizing how a mixture of evil rumors and public ignorance had made them out to be terrorist anti-Americans. A serious article in the same issue about Obama's political beginnings showed up his occasionally less-than-idealistic albeit politically shrewd maneuvering. After seeing that magazine issue earlier in the day I found myself daydreaming about various implications of Obama's personality. It happened that I later attended a pro-Obama Democratic Party organizing gathering that evening. There was much talk indicating some disenchantment among his early, fervent supporters at the realization that he now seemed more manipulative and cunning than they might have expected.

In solitary moments at home later that night I found myself again ruminating about this “new” Obama and about how to rationalize our support for his candidacy. In the darkness of the early hours of the next day, I awoke from a dream in which I had encountered Obama alone in a simple diner. We chatted as we ate lunch. He explained that he had slipped away from his usual campaign entourage to find some quiet moments. Our conversation was warm, friendly, and he seemed to be unusually intelligent and creative. He also listened respectfully and thoughtfully to my comments about current national and international issues. I had the sense that he might find a place for me as an advisor if he won the election. Then we parted so he could return to his campaign activities and I awoke, suddenly realizing that I’d forgotten to tell him my name!

This obviously wishful dream clearly reflected my “current concerns”, a clear wish fulfillment that I, as an earlier supporter of Hillary Clinton, could now feel that Obama was indeed a truly gifted person I could support. At a deeper level it continued a recurrent theme of my more personal waking thoughts and night dreams. As a recent retiree from Yale, I often hoped that I might still be a useful member of my department or a person of some importance at the university or in society more generally.

Conclusion

I should like to propose that we humans have evolved with a process of ongoing thought that reshapes new information in relation to our almost continuous regurgitation of the vast number of our social encounters, recent or relatively remote in time, our readings, television-watching, work or school inputs, and physical needs or strivings. These are manifest in conscious thought during default periods of reduced mental or physical work or attention to entertainment stimuli. Such conscious thoughts may take the form of daydreams or night dreams. If we pay attention and take such new mixtures of cognitive processes somewhat seriously we may recognize opportunities for new ways of confronting our current concerns or for resolving issues raised in our work or other daily life dilemmas. Creative scientists or writers have learned to use such opportunities in their activities. Let me leave you, however, with this concern: Is it possible that the present-day multitasking overload of processing television, radio or CDs, video games, computer activities including chat rooms, blogs, avatar play, and also our using i-phones, texting and tweeting is now substituting for a private, personal stream of consciousness? Will we lose our capacity for an extended interior monologue? An intriguing new area of research beckons.