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**Ch 9**

**CHEATING CHAOS**

DESPITE EVERYTHING that has been said so far, some people may still think that it must be easy to be happy as long as one is lucky enough to be healthy, rich, and handsome. But how can the quality of life be improved when things are not going our way, when fortune deals us an unfair hand? One can afford to ponder the difference between enjoyment and pleasure if one doesn’t have to worry about running out of money before the end of the month. For most people, such distinctions are too much of a luxury to be indulged in. It is okay to think of challenges and complexity if you have an interesting, well-paying profession, but why try to improve a job that is basically dumb and dehumanizing? And how can we expect people who are ill, impoverished, or stricken by adversity to control their consciousness? Surely they would need to improve concrete material conditions before flow could add anything appreciable to the quality of existence. Optimal experience, in other words, should be regarded as the frosting on a cake made with solid ingredients like health and wealth; by itself it is a flimsy decoration. Only with a solid base of these more real advantages does it help make the subjective aspects of life satisfying.

Needless to say, the whole thesis of this book argues against such a conclusion. Subjective experience is not just one of the dimensions of life, it is life itself. Material conditions are secondary: they only affect us indirectly, by way of experience. Flow, and even pleasure, on the other hand, benefit the quality of life directly. Health, money, and other material advantages may or may not improve life. Unless a person has learned to control psychic energy, chances are such advantages will be useless.

Conversely, many individuals who have suffered harshly end up not only surviving, but also thoroughly enjoying their lives. How is it possible that people are able to achieve harmony of mind, and grow in complexity, even when some of the worst things imaginable happen to them? That is the outwardly simple question this chapter will explore. In the process, we shall examine some of the strategies people use to cope with stressful events, and review how an autotelic self can manage to create order out of chaos.

**TRAGEDIES TRANSFORMED**

It would be naively idealistic to claim that no matter what happens to him, a person in control of consciousness will be happy. There are certainly limits to how much pain, or hunger, or deprivation a body can endure. Yet it is also true, as Dr. Franz Alexander has so well stated: “The fact that the mind rules the body is, in spite of its neglect by biology and medicine, the most fundamental fact which we know about the process of life.” Holistic medicine and such books as Norman Cousins’s account of his successful fight against terminal illness and Dr. Bernie Siegel’s descriptions of self-healing are beginning to redress the abstractly materialist view of health that has become so prevalent in this century. The relevant point to be made here is that a person who knows how to find flow from life is able to enjoy even situations that seem to allow only despair.

Rather incredible examples of how people achieve flow despite extreme handicaps have been collected by Professor Fausto Massimini of the psychology department of the University of Milan. One group he and his team studied was composed of paraplegics, generally young people who at some point in the past, usually as a result of an accident, have lost the use of their limbs. The unexpected finding of this study was that a large proportion of the victims mentioned the accident that caused paraplegia as both one of the most negative and one of the most positive events in their lives. The reason tragic events were seen as positive was that they presented the victim with very clear goals while reducing contradictory and inessential choices. The patients who learned to master the new challenges of their impaired situation felt a clarity of purpose they had lacked before. Learning to live again was in itself a matter of enjoyment and pride, and they were able to turn the accident from a source of entropy into an occasion of inner order.

Lucio, one of the members of this group, was a twenty-year-old happy-go-lucky gas station attendant when a motorcycle accident paralyzed him below the waist. He had previously liked playing rugby and listening to music, but basically he remembers his life as purposeless and uneventful. After the accident his enjoyable experiences have increased both in number and complexity. Upon recovery from the tragedy he enrolled in college, graduated in languages, and now works as a freelance tax consultant. Both study and work are intense sources of flow; so are fishing and shooting with a bow and arrow. He is currently a regional archery champion— competing from a wheelchair.

These are some of the comments Lucio made in his interview: “When I became paraplegic, it was like being born again. I had to learn from scratch everything I used to know, but in a different way. I had to learn to dress myself, to use my head better. I had to become part of the environment, and use it without trying to control it…. it took commitment, willpower, and patience. As far as the future is concerned, I hope to keep improving, to keep breaking through the limitations of my handicap…. Everybody must have a purpose. After becoming a paraplegic, these improvements have become my life goal.”

Franco is another person in this group. His legs were immobilized five years ago, and he also developed severe urological problems, requiring several surgical operations. Before his accident he was an electrician, and he often enjoyed his work. But his most intense flow experience came from acrobatic dancing on Saturday nights, so the paralysis of his legs was an especially bitter blow. Franco now works as a counselor to other paraplegics. In this case, too, the almost inconceivable setback has led to an enrichment, rather than a diminution, of the complexity of experience. Franco sees his main challenge now as that of helping other victims avoid despair, and assisting their physical rehabilitation. He says the most important goal in his life is to “feel that I can be of use to others, help recent victims accept their situation.” Franco is engaged to a paraplegic girl who had been resigned to a life of passivity after her accident. On their first date together, he drove his car (adapted for the handicapped) on a trip to the nearby hills. Unfortunately, the car broke down, and the two of them were left stranded on a deserted patch of road. His fiancée panicked; even Franco admits to having lost his nerve. But eventually they managed to get help, and as is usual after small victories of this kind, they both emerged afterward feeling much more confident of themselves.

Another sample studied by the Milan group was made up of several dozen individuals who were either congenitally blind or had lost their sight sometime after birth. Again, what is so remarkable about these interviews is the number of people who describe the loss of their sight as a positive event that has enriched their lives. Pilar, for instance, is a thirty-three-year-old woman whose retinas became detached from both eyes when she was twelve, and who has been unable to see ever since. Blindness freed her from a painfully violent and poor family situation, and made her life more purposeful and rewarding than it probably would have been had she stayed home with her sight intact. Like many other blind people, she now works as an operator at a manual telephone exchange. Among her current flow experiences she mentions working, listening to music, cleaning friends’ cars, and “anything else I happen to be doing.” At work what she enjoys most is knowing that the calls she has to manage are clicking along smoothly, and the entire traffic of conversation meshing like the instruments of an orchestra. At such times she feels “like I’m God, or something. It is very fulfilling.” Among the positive influences in her life Pilar mentions having lost her sight, because “it made me mature in ways that I could never have become even with a college degree… for instance, problems no longer affect me with the pathos they used to, and the way that they affect so many of my peers.”

Paolo, who is now thirty, lost the use of his eyes entirely six years ago. He does not list blindness among the positive influences, but he mentions four positive outcomes of this tragic event: “First, although I realize and accept my limitations, I am going to keep attempting to overcome them. Second, I have decided to always try changing those situations I don’t like. Third, I am very careful not to repeat any of the mistakes I make. And finally, now I have no illusions, but I try to be tolerant with myself so I can be tolerant with others also.” It is astonishing how for Paolo, as for most of the people with handicaps, the control of consciousness has emerged in its stark simplicity as the foremost goal. But this does not mean that the challenges are purely intrapsychic. Paolo belongs to the national chess federation; he participates in athletic competitions for the blind; he makes his living by teaching music. He lists playing the guitar, playing chess, sports, and listening to music among his current flow experiences. Recently he finished seventh in a swim meet for the handicapped in Sweden, and he won a chess championship in Spain. His wife is also blind, and coaches a blind women’s athletic team. He is presently planning to write a Braille text for learning how to play the classical guitar. Yet none of these astonishing achievements would matter much if Paolo did not feel in control of his inner life.

And then there is Antonio, who teaches high school and who is married to a woman who is also blind; their current challenge is to adopt a blind child, the first time such an adoption has been considered possible in the entire country… Anita, who reports very intense flow experiences sculpting in clay, making love, and reading Braille… Dino, eighty-five years old and blind from birth, married with two children, who describes his work, which consists in restoring old chairs, as an intricate and always available flow experience: “When I take a broken chair I use natural rich cane, not the synthetic fibers they use in factories… it feels so great when the ‘pull’ is right, the tension elastic— especially when it happens at the first try… When I get through, the seat will last twenty years.”… and so many others like them.

Another group Professor Massimini and his team has studied included homeless vagrants, “street people,” who are just as frequent in the great European cities as they are in Manhattan. We tend to feel sorry for these destitutes, and not so long ago many of them, who seem unable to adapt to “normal” life, would have been diagnosed as psychopaths or worse. In fact, many of them have proven to be unfortunate, helpless individuals whose strength has been exhausted by catastrophes of various kinds. Nevertheless, it is again astonishing to learn how many of them have been able to transform bleak conditions into an existence that has the characteristics of a satisfying flow experience. Of the many examples, we shall quote extensively from one interview that can stand for many others.

Reyad is a thirty-three-year-old Egyptian who currently sleeps in the parks of Milan, eats in charity kitchens, and occasionally washes dishes for restaurants whenever he needs some cash. When during the interview he was read a description of the flow experience, and was asked if this ever happened to him, he answered,

Yes. It describes my entire life from 1967 up to now. After the War of 1967 I decided to leave Egypt and start hitchhiking toward Europe. Ever since I have been living with my mind concentrated within myself. It has not been just a trip, it has been a search for identity. Every man has something to discover within himself. The people in my town were sure I was crazy when I decided to start walking to Europe. But the best thing in life is to know oneself…. My idea from 1967 on has remained the same: to find myself. I had to struggle against many things. I passed through Lebanon and its war, through Syria, Jordan, Turkey, Yugoslavia, before getting here. I had to confront all sorts of natural disasters; I slept in ditches near the road in thunderstorms, I was involved in accidents, I have seen friends die next to me, but my concentration has never flagged…. It has been an adventure that so far has lasted twenty years, but it will keep going on for the rest of my life….

Through these experiences I have come to see that the world is not worth much. The only thing that counts for me now, first and last, is God. I am most concentrated when I pray with my prayer beads. Then I am able to put my feelings to sleep, to calm myself and avoid becoming crazy. I believe that destiny rules life, and it makes no sense to struggle too hard…. During my journey I have seen hunger, war, death, and poverty. Now through prayer I have begun to hear myself, I have returned toward my center, I have achieved concentration and I have understood that the world has no value. Man was born to be tested on this earth. Cars, television sets, clothes are secondary. The main thing is that we were born to praise the Lord. Everyone has his own fate, and we should be like the lion in the proverb. The lion, when he runs after a pack of gazelles, can only catch them one at a time. I try to be like that, and not like Westerners who go crazy working even though they cannot eat more than their daily bread…. If I am to live twenty more years, I will try to live enjoying each moment, instead of killing myself to get more…. If I am to live like a free man who does not depend on anyone, I can afford to go slowly; if I don’t earn anything today, it does not matter. It means that this happens to be my fate. Next day I may earn 100 million— or get a terminal illness. Like Jesus Christ said, What does it benefit to man if he gains the entire world, but loses himself? I have tried first to conquer myself; I don’t care if I lose the world.

I set out on this journey like a baby bird hatching from its egg; ever since I have been walking in freedom. Every man should get to know himself and experience life in all its forms. I could have gone on sleeping soundly in my bed, and found work in my town, because a job was ready for me, but I decided to sleep with the poor, because one must suffer to become a man. One does not get to be a man by getting married, by having sex: to be a man means to be responsible, to know when it is time to speak, to know what has to be said, to know when one must stay silent.

Reyad spoke at much greater length, and all his remarks were consistent with the unwavering purpose of his spiritual quest. Like the disheveled prophets who roamed the deserts in search of enlightenment two thousand years ago, this traveler has distilled everyday life into a goal of hallucinatory clarity: to control his consciousness in order to establish a connection between his self and God. What were the causes that led him to give up the “good things in life” and pursue such a chimera? Was he born with a hormonal imbalance? Did his parents traumatize him? These questions, which are the ones that usually interest psychologists, shall not concern us here. The point is not to explain what accounts for Reyad’s strangeness, but to recognize that, given the fact he is who he is, Reyad has transformed living conditions most people would find unbearable into a meaningful, enjoyable existence. And that is more than many people living in comfort and luxury can claim.

**COPING WITH STRESS**

“When a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully,” remarked Samuel Johnson, in a saying whose truth applies to the cases just presented. A major catastrophe that frustrates a central goal of life will either destroy the self, forcing a person to use all his psychic energy to erect a barrier around remaining goals, defending them against further onslaughts of fate; or it will provide a new, more clear, and more urgent goal: to overcome the challenges created by the defeat. If the second road is taken, the tragedy is not necessarily a detriment to the quality of life. Indeed, as in the cases of Lucio, Paolo, and innumerable others like them, what objectively seems a devastating event may come to enrich the victims’ lives in new and unexpected ways. Even the loss of one of the most basic human faculties, like that of sight, does not mean that a person’s consciousness need become impoverished; the opposite is often what happens. But what makes the difference? How does it come about that the same blow will destroy one person, while another will transform it into inner order?

Psychologists usually study the answers to such questions under the heading of coping with stress. It is obvious that certain events cause more psychological strain than others: for example, the death of a spouse is several orders of magnitude more stressful than taking out a mortgage on a house, which in turn causes more strain than being given a traffic ticket. But it is also clear that the same stressful event might make one person utterly miserable, while another will bite the bullet and make the best of it. This difference in how a person responds to stressful events has been called “coping ability” or “coping style.”

In trying to sort out what accounts for a person’s ability to cope with stress, it is useful to distinguish three different kinds of resources. The first is the external support available, and especially the network of social supports. A major illness, for instance, will be mitigated to a certain extent if one has good insurance and a loving family. The second bulwark against stress includes a person’s psychological resources, such as intelligence, education, and relevant personality factors. Moving to a new city and having to establish new friendships will be more stressful to an introvert than to an extrovert. And finally, the third type of resource refers to the coping strategies that a person uses to confront the stress.

Of these three factors, the third one is the most relevant to our purposes. External supports by themselves are not that effective in mitigating stress. They tend to help only those who can help themselves. And psychological resources are largely outside our control. It is difficult to become much smarter, or much more outgoing, than one was at birth. But how we cope is both the most important factor in determining what effects stress will have and the most flexible resource, the one most under our personal control.

There are two main ways people respond to stress. The positive response is called a “mature defense” by George Vaillant, a psychiatrist who has studied the lives of successful and relatively unsuccessful Harvard graduates over a period of about thirty years; others call it “transformational coping.” The negative response to stress would be a “neurotic defense” or “regressive coping,” according to these models.

To illustrate the difference between them, let us take the example of Jim, a fictitious financial analyst who has just been fired from a comfortable job at age forty. Losing one’s job is reckoned to be about midpoint in the severity of life stresses; its impact varies, of course, with a person’s age and skills, the amount of his savings, and the conditions of the labor market. Confronted with this unpleasant event, Jim can take one of two opposite courses of action. He can withdraw into himself, sleep late, deny what has happened, and avoid thinking about it. He can also discharge his frustration by turning against his family and friends, or disguise it by starting to drink more than usual. All these would be examples of regressive coping, or immature defenses.

Or Jim can keep his cool by suppressing temporarily his feelings of anger and fear, analyzing the problem logically, and reassessing his priorities. Afterward he might redefine what the problem is, so that he can solve it more easily— for instance, by deciding to move to a place where his skills are more in demand, or by retraining himself and acquiring the skills for a new job. If he takes this course, he would be using mature defenses, or transformational coping.

Few people rely on only one or the other strategy exclusively. It is more likely that Jim would get drunk the first night; have a fight with his wife, who had been telling him for years that his job was lousy; and then the following morning, or the week after, he would simmer down and start figuring out what to do next. But people do differ in their abilities to use one or the other strategy. The paraplegic who became a champion archer, or the blind chess master, visited by misfortunes so intense that they are off the scale of stressful life events, are examples of individuals who have mastered transformational coping. Others, however, when confronted by much less intense levels of stress, might give up and respond by scaling down the complexity of their lives forever.

The ability to take misfortune and make something good come of it is a very rare gift. Those who possess it are called “survivors,” and are said to have “resilience,” or “courage.” Whatever we call them, it is generally understood that they are exceptional people who have overcome great hardships, and have surmounted obstacles that would daunt most men and women. In fact, when average people are asked to name the individuals they admire the most, and to explain why these men and women are admired, courage and the ability to overcome hardship are the qualities most often mentioned as a reason for admiration. As Francis Bacon remarked, quoting from a speech by the Stoic philosopher Seneca, “The good things which belong to prosperity are to be wished, but the good things that belong to adversity are to be admired.”

In one of our studies the list of admired persons included an old lady who, despite her paralysis, was always cheerful and ready to listen to other people’s troubles; a teenage camp counselor who, when a swimmer was missing and everybody else panicked, kept his head and organized a successful rescue effort; a female executive who, despite ridicule and sexist pressures, prevailed in a difficult working environment; and Ignaz Semmelweis, the Hungarian physician who in the last century insisted that the lives of many mothers could be saved at childbirth if obstetricians would only wash their hands, even though the rest of the doctors ignored and mocked him. These and the many hundreds of others mentioned were respected for the same reasons: They stood firm for what they believed in, and didn’t let opposition daunt them. They had courage, or what in earlier time was known simply as “virtue”— a term derived from the Latin word vir, or man.

It makes sense, of course, that people should look up to this one quality more than to any other. Of all the virtues we can learn no trait is more useful, more essential for survival, and more likely to improve the quality of life than the ability to transform adversity into an enjoyable challenge. To admire this quality means that we pay attention to those who embody it, and we thereby have a chance to emulate them if the need arises. Therefore admiring courage is in itself a positive adaptive trait; those who do so may be better prepared to ward off the blows of misfortune.

But simply calling the ability to cheat chaos “transformational coping,” and people who are good at it “courageous,” falls short of explaining this remarkable gift. Like the character in Moliere who said that sleep was caused by “dormitive power,” we fail to illuminate matters if we say that effective coping is caused by the virtue of courage. What we need is not only names and descriptions, but an understanding of how the process works. Unfortunately our ignorance in this matter is still very great.

**THE POWER OF DISSIPATIVE STRUCTURES**

One fact that does seem clear, however, is that the ability to make order out of chaos is not unique to psychological processes. In fact, according to some views of evolution, complex life forms depend for their existence on a capacity to extract energy out of entropy— to recycle waste into structured order. The Nobel prize-winning chemist Ilya Prigogine calls physical systems that harness energy which otherwise would be dispersed and lost in random motion “dissipative structures.” For example, the entire vegetable kingdom on our planet is a huge dissipative structure because it feeds on light, which normally would be a useless by-product of the sun’s combustion. Plants have found a way to transform this wasted energy into the building blocks out of which leaves, flowers, fruit, bark, and timber are fashioned. And because without plants there would be no animals, all life on earth is ultimately made possible by dissipative structures that capture chaos and shape it into a more complex order.

Human beings have also managed to utilize waste energy to serve their goals. The first major technological invention, that of fire, is a good example. In the beginning, fires started at random: volcanoes, lightning, and spontaneous combustion ignited fuel here and there, and the energy of the decomposing timber was dispersed without purpose. As they learned to take control over fire people used the dissipating energy to warm their caves, cook their food, and finally to smelt and forge objects made of metal. Engines run by steam, electricity, gasoline, and nuclear fusion are also based on the same principle: to take advantage of energy that otherwise would be lost, or opposed to our goals. Unless men learned various tricks for transforming the forces of disorder into something they could use, we would not have survived as successfully as we have.

The psyche, as we have seen, operates according to similar principles. The integrity of the self depends on the ability to take neutral or destructive events and turn them into positive ones. Getting fired could be a godsend, if one took the opportunity to find something else to do that was more in tune with one’s desires. In each person’s life, the chances of only good things happening are extremely slim. The likelihood that our desires will be always fulfilled is so minute as to be negligible. Sooner or later everyone will have to confront events that contradict his goals: disappointments, severe illness, financial reversal, and eventually the inevitability of one’s death. Each event of this kind is negative feedback that produces disorder in the mind. Each threatens the self and impairs its functioning. If the trauma is severe enough, a person may lose the capacity to concentrate on necessary goals. If that happens, the self is no longer in control. If the impairment is very severe, consciousness becomes random, and the person “loses his mind”— the various symptoms of mental disease take over. In less severe cases the threatened self survives, but stops growing; cowering under attack, it retreats behind massive defenses and vegetates in a state of continuous suspicion.

It is for this reason that courage, resilience, perseverance, mature defense, or transformational coping— the dissipative structures of the mind— are so essential. Without them we would be constantly suffering through the random bombardment of stray psychological meteorites. On the other hand, if we do develop such positive strategies, most negative events can be at least neutralized, and possibly even used as challenges that will help make the self stronger and more complex.

Transformational skills usually develop by late adolescence. Young children and early teens still depend to a large extent on a supportive social network to buffer them against things that go wrong. When a blow falls on a young teenager— even something as trivial as a bad grade, a pimple erupting on the chin, or a friend ignoring him at school— it seems to him as if the world is about to end, and there is no longer any purpose in life. Positive feedback from other people usually picks his mood up in a matter of minutes; a smile, a phone call, a good song captures his attention, distracting him from worries and restoring order in the mind. We have learned from the Experience Sampling Method studies that a healthy adolescent stays depressed on the average for only half an hour. (An adult takes, on the average, twice as long to recover from bad moods.)

In a few years, however— by the time they are seventeen or eighteen— teenagers are generally able to place negative events in perspective, and they are no longer destroyed by things that don’t work out as desired. It is at this age that for most people the ability to control consciousness begins. Partly this ability is a product of the mere passage of time: having been disappointed before, and having survived the disappointment, the older teen knows that a situation is not as bad as it may seem at the moment. Partly it is knowing that other people also have been going through the same problems, and have been able to resolve them. The knowledge that one’s sufferings are shared adds an important perspective to the egocentrism of youth.

The peak in the development of coping skills is reached when a young man or woman has achieved a strong enough sense of self, based on personally selected goals, that no external disappointment can entirely undermine who he or she is. For some people the strength derives from a goal that involves identification with the family, with the country, or with a religion or an ideology. For others, it depends on mastery of a harmonious system of symbols, such as art, music, or physics. Srinivasa Ramanujan, the young mathematical genius from India, had so much of his psychic energy invested in number theory that poverty, sickness, pain, and even rapidly approaching death, although tiresome, had no chance of distracting his mind from calculations— in fact, they just spurred him on to greater creativity. On his deathbed he kept on marveling at the beauty of the equations he was discovering, and the serenity of his mind reflected the order of the symbols he used.

Why are some people weakened by stress, while others gain strength from it? Basically the answer is simple: those who know how to transform a hopeless situation into a new flow activity that can be controlled will be able to enjoy themselves, and emerge stronger from the ordeal. There are three main steps that seem to be involved in such transformations:

1. *Unselfconscious self-assurance*. As Richard Logan found in his study of individuals who survived severe physical ordeals— polar explorers wandering alone in the Arctic, concentration camp inmates— one common attitude shared by such people was the implicit belief that their destiny was in their hands. They did not doubt their own resources would be sufficient to allow them to determine their fate. In that sense one would call them self-assured, yet at the same time, their egos seem curiously absent: they are not self-centered; their energy is typically not bent on dominating their environment as much as on finding a way to function within it harmoniously.

This attitude occurs when a person no longer sees himself in opposition to the environment, as an individual who insists that his goals, his intentions take precedence over everything else. Instead, he feels a part of whatever goes on around him, and tries to do his best within the system in which he must operate. Paradoxically, this sense of humility— the recognition that one’s goals may have to be subordinated to a greater entity, and that to succeed one may have to play by a different set of rules from what one would prefer— is a hallmark of strong people.

To take a trivial but common example, suppose that one cold morning, when you are in a hurry to get to the office, the car engine won’t start when you try the ignition. In such circumstances many people become so increasingly obsessed with their goal— getting to the office— that they cannot formulate any other plans. They may curse the car, turn the ignition key more frantically, slam the dashboard in exasperation— usually to no avail. Their ego involvement prevents them from coping effectively with frustration and from realizing their goal. A more sensible approach would be to recognize that it makes no difference to the car that you have to be downtown in a hurry. The car follows its own laws, and the only way to get it moving is by taking them into account. If you have no idea what may be wrong with the starter, it makes more sense to call a cab or form an alternative goal: cancel the appointment and find something useful to do at home instead.

Basically, to arrive at this level of self-assurance one must trust oneself, one’s environment, and one’s place in it. A good pilot knows her skills, has confidence in the machine she is flying, and is aware of what actions are required in case of a hurricane, or in case the wings ice over. Therefore she is confident in her ability to cope with whatever weather conditions may arise— not because she will force the plane to obey her will, but because she will be the instrument for matching the properties of the plane to the conditions of the air. As such she is an indispensable link for the safety of the plane, but it is only as a link— as a catalyst, as a component of the air-plane-person system, obeying the rules of that system— that she can achieve her goal.

2. *Focusing attention on the world*. It is difficult to notice the environment as long as attention is mainly focused inward, as long as most of one’s psychic energy is absorbed by the concerns and desires of the ego. People who know how to transform stress into enjoyable challenge spend very little time thinking about themselves. They are not expending all their energy trying to satisfy what they believe to be their needs, or worrying about socially conditioned desires. Instead their attention is alert, constantly processing information from their surroundings. The focus is still set by the person’s goal, but it is open enough to notice and adapt to external events even if they are not directly relevant to what he wants to accomplish.

An open stance makes it possible for a person to be objective, to be aware of alternative possibilities, to feel a part of the surrounding world. This total involvement with the environment is well expressed by the rock climber Yvon Chouinard, describing one of his ascents on the fearsome El Capitan in Yosemite: “Each individual crystal in the granite stood out in bold relief. The varied shapes of the clouds never ceased to attract our attention. For the first time, we noticed tiny bugs that were all over the walls, so tiny that they were barely noticeable. I stared at one for fifteen minutes, watching him move and admiring his brilliant red color.

“How could one ever be bored with so many good things to see and feel! This unity with our joyous surroundings, this ultra-penetrating perception, gave us a feeling that we had not had for years.”

Achieving this unity with one’s surroundings is not only an important component of enjoyable flow experiences but is also a central mechanism by which adversity is conquered. In the first place, when attention is focused away from the self, frustrations of one’s desires have less of a chance to disrupt consciousness. To experience psychic entropy one must concentrate on the internal disorder; but by paying attention to what is happening around oneself instead, the destructive effects of stress are lessened. Second, the person whose attention is immersed in the environment becomes part of it— she participates in the system by linking herself to it through psychic energy. This, in turn, makes it possible for her to understand the properties of the system, so that she can find a better way to adapt to a problematic situation.

Returning again to the example of the car that wouldn’t start: if your attention is completely absorbed by the goal of making it to the office in time, your mind might be full of images about what will happen if you are late, and of hostile thoughts about your uncooperative vehicle. Then you are less likely to notice what the car is trying to tell you: that the engine is flooded or that the battery is dead. Similarly the pilot who spends too much energy contemplating what she wants the plane to do might miss the information that will enable her to navigate safely. A sense of complete openness to the environment is well described by Charles Lindbergh, who experienced it during his epoch-making solo crossing of the Atlantic:

My cockpit is small, and its walls are thin: but inside this cocoon I feel secure, despite the speculations of my mind…. I become minutely conscious of details in my cockpit— of the instruments, the levers, the angles of construction. Each item takes on a new value. I study weld marks on the tubing (frozen ripples of steel through which pass invisible hundredweights of strain), a dot of radiolite paint on the altimeter’s face… the battery of fuel valves…— all such things, which I never considered much before, are now obvious and important…. I may be flying a complicated airplane, rushing through space, but in this cabin I’m surrounded by simplicity and thoughts set free of time.

A former colleague of mine, G., used to tell a gruesome story from his air force years that illustrates how dangerous excessive concern with safety can be, when it demands so much attention that it makes us oblivious to the rest of reality. During the Korean War, G.’ s unit was involved in routine parachute training. One day, as the group was preparing for a drop, it was discovered that there were not enough regular parachutes to go around, and one of the right-handed men was forced to take a left-handed chute. “It is the same as the others,” the ordnance sergeant assured him, “but the rip cord hangs on the left side of the harness. You can release the chute with either hand, but it is easier to do it with the left.” The team boarded the plane, went up to eight thousand feet, and over the target area one after the other they jumped out. Everything went well, except for one of the men: his parachute never opened, and he fell straight to his death on the desert below.

G. was part of the investigating team sent to determine why the chute didn’t open. The dead soldier was the one who had been given the left-handed release latch. The uniform on the right side of his chest, where the rip cord for a regular parachute would have been, had been completely torn off; even the flesh of his chest had been gouged out in long gashes by his bloody right hand. A few inches to the left was the actual rip cord, apparently untouched. There had been nothing wrong with the parachute. The problem had been that, while falling through that awful eternity, the man had become fixated on the idea that to open the chute he had to find the release in the accustomed place. His fear was so intense that it blinded him to the fact that safety was literally at his fingertips.

In a threatening situation it is natural to mobilize psychic energy, draw it inward, and use it as a defense against the threat. But this innate reaction more often than not compromises the ability to cope. It exacerbates the experience of inner turmoil, reduces the flexibility of response, and, perhaps worse than anything else, it isolates a person from the rest of the world, leaving him alone with his frustrations. On the other hand, if one continues to stay in touch with what is going on, new possibilities are likely to emerge, which in turn might suggest new responses, and one is less likely to be entirely cut off from the stream of life.

3. *The discovery of new solutions*. There are basically two ways to cope with a situation that creates psychic entropy. One is to focus attention on the obstacles to achieving one’s goals and then to move them out of the way, thereby restoring harmony in consciousness. This is the direct approach. The other is to focus on the entire situation, including oneself, to discover whether alternative goals may not be more appropriate, and thus different solutions possible.

Let us suppose, for instance, that Phil, who is due to be promoted to a vice presidency within his company, sees that the appointment might go instead to a colleague who gets along better with the CEO. At this point he has two basic options: to find ways to change the CEO’s mind about who is the better person for the job (the first approach), or to consider another set of goals, like moving to another division of the company, changing careers altogether, or scaling down his career objectives and investing his energies in the family, the community, or his own self-development (the second approach). Neither solution is “better” in an absolute sense; what matters is whether it makes sense in terms of Phil’s overall goals, and whether it allows him to maximize enjoyment in his life.

Whatever solution he adopts, if Phil takes himself, his needs, and his desires too seriously, he is going to be in trouble as soon as things do not go his way. He will not have enough disposable attention available to seek out realistic options, and instead of finding enjoyable new challenges, he will be surrounded instead by stressful threats.

Almost every situation we encounter in life presents possibilities for growth. As we have seen, even terrible disasters like blindness and paraplegia can be turned into conditions for enjoyment and greater complexity. Even the approach of death itself can serve to create harmony in consciousness, rather than despair.

But these transformations require that a person be prepared to perceive unexpected opportunities. Most of us become so rigidly fixed in the ruts carved out by genetic programming and social conditioning that we ignore the options of choosing any other course of action. Living exclusively by genetic and social instructions is fine as long as everything goes well. But the moment biological or social goals are frustrated— which in the long run is inevitable— a person must formulate new goals, and create a new flow activity for himself, or else he will waste his energies in inner turmoil.

But how does one go about discovering these alternative strategies? The answer is basically simple: if one operates with unselfconscious assurance, and remains open to the environment and involved in it, a solution is likely to emerge. The process of discovering new goals in life is in many respects similar to that by which an artist goes about creating an original work of art. Whereas a conventional artist starts painting a canvas knowing what she wants to paint, and holds to her original intention until the work is finished, an original artist with equal technical training commences with a deeply felt but undefined goal in mind, keeps modifying the picture in response to the unexpected colors and shapes emerging on the canvas, and ends up with a finished work that probably will not resemble anything she started out with. If the artist is responsive to her inner feelings, knows what she likes and does not like, and pays attention to what is happening on the canvas, a good painting is bound to emerge. On the other hand, if she holds on to a preconceived notion of what the painting should look like, without responding to the possibilities suggested by the forms developing before her, the painting is likely to be trite.

We all start with preconceived notions of what we want from life. These include the basic needs programmed by our genes to ensure survival— the need for food, comfort, sex, dominance over other beings. They also include the desires that our specific culture has inculcated in us— to be slim, rich, educated, and well liked. If we embrace these goals and are lucky, we may replicate the ideal physical and social image for our historical time and place. But is this the best use of our psychic energy? And what if we cannot realize these ends? We will never become aware of other possibilities unless, like the painter who watches with care what is happening on the canvas, we pay attention to what is happening around us, and evaluate events on the basis of their direct impact on how we feel, rather than evaluating them exclusively in terms of preconceived notions. If we do so we may discover that, contrary to what we were led to believe, it is more satisfying to help another person than to beat him down, or that it is more enjoyable to talk with one’s two-year-old than to play golf with the company president.

**THE AUTOTELIC SELF: A SUMMARY**

In this chapter we have seen it demonstrated repeatedly that outside forces do not determine whether adversity will be able to be turned into enjoyment. A person who is healthy, rich, strong, and powerful has no greater odds of being in control of his consciousness than one who is sickly, poor, weak, and oppressed. The difference between someone who enjoys life and someone who is overwhelmed by it is a product of a combination of such external factors and the way a person has come to interpret them— that is, whether he sees challenges as threats or as opportunities for action.

The “autotelic self” is one that easily translates potential threats into enjoyable challenges, and therefore maintains its inner harmony. A person who is never bored, seldom anxious, involved with what goes on, and in flow most of the time may be said to have an autotelic self. The term literally means “a self that has self-contained goals,” and it reflects the idea that such an individual has relatively few goals that do not originate from within the self. For most people, goals are shaped directly by biological needs and social conventions, and therefore their origin is outside the self. For an autotelic person, the primary goals emerge from experience evaluated in consciousness, and therefore from the self proper.

The autotelic self transforms potentially entropic experience into flow. Therefore the rules for developing such a self are simple, and they derive directly from the flow model. Briefly, they can be summarized as follows:

1. *Setting goals*. To be able to experience flow, one must have clear goals to strive for. A person with an autotelic self learns to make choices— ranging from lifelong commitments, such as getting married and settling on a vocation, to trivial decisions like what to do on the weekend or how to spend the time waiting in the dentist’s office— without much fuss and the minimum of panic. Selecting a goal is related to the recognition of challenges. If I decide to learn tennis, it follows that I will have to learn to serve, to use my backhand and forehand, to develop my endurance and my reflexes. Or the causal sequence may be reversed: because I enjoyed hitting the ball over the net, I may develop the goal of learning how to play tennis. In any case goals and challenges imply each other. As soon as the goals and challenges define a system of action, they in turn suggest the skills necessary to operate within it. If I decide to quit my job and become a resort operator, it follows that I should learn about hotel management, financing, commercial locations, and so on. Of course, the sequence may also start in reverse order: what I perceive my skills to be could lead to the development of a particular goal that builds on those strengths— I may decide to become a resort operator because I see myself as having the right qualifications for it. And to develop skills, one needs to pay attention to the results of one’s actions— to monitor the feedback. To become a good resort operator, I have to interpret correctly what the bankers who might lend me money think about my business proposal. I need to know what features of the operation are attractive to customers and what features they dislike. Without constant attention to feedback I would soon become detached from the system of action, cease to develop skills, and become less effective. One of the basic differences between a person with an autotelic self and one without it is that the former knows that it is she who has chosen whatever goal she is pursuing. What she does is not random, nor is it the result of outside determining forces. This fact results in two seemingly opposite outcomes. On the one hand, having a feeling of ownership of her decisions, the person is more strongly dedicated to her goals. Her actions are reliable and internally controlled. On the other hand, knowing them to be her own, she can more easily modify her goals whenever the reasons for preserving them no longer make sense. In that respect, an autotelic person’s behavior is both more consistent and more flexible.

2. *Becoming immersed in the activity*. After choosing a system of action, a person with an autotelic personality grows deeply involved with whatever he is doing. Whether flying a plane nonstop around the world or washing dishes after dinner, he invests attention in the task at hand.

To do so successfully one must learn to balance the opportunities for action with the skills one possesses. Some people begin with unrealistic expectations, such as trying to save the world or to become millionaires before the age of twenty. When their hopes are dashed, most become despondent, and their selves wither from the loss of psychic energy expended in fruitless attempts. At the other extreme, many people stagnate because they do not trust their own potential. They choose the safety of trivial goals, and arrest the growth of complexity at the lowest level available. To achieve involvement with an action system, one must find a relatively close mesh between the demands of the environment and one’s capacity to act.

For instance, suppose a person walks into a room full of people and decides to “join the party,” that is, to get acquainted with as many people as possible while having a good time. If the person lacks an autotelic self he might be incapable of starting an interaction by himself, and withdraw into a corner, hoping that someone will notice him. Or he may try to be boisterous and overly slick, turning people off with inappropriate and superficial friendliness. Neither strategy would be very successful or likely to provide a good time. A person with an autotelic self, upon entering the room, would shift his attention away from himself to the party— the “action system” he wishes to join. He would observe the guests, try to guess which of them might have matching interests and compatible temperament, and start talking to that person about topics he suspects will be mutually agreeable. If the feedback is negative— if the conversation turns out to be boring, or above one partner’s head— he will try a different topic or a different partner. Only when a person’s actions are appropriately matched with the opportunities of the action system does he truly become involved.

Involvement is greatly facilitated by the ability to concentrate. People who suffer from attentional disorders, who cannot keep their minds from wandering, always feel left out of the flow of life. They are at the mercy of whatever stray stimulus happens to flash by. To be distracted against one’s will is the surest sign that one is not in control. Yet it is amazing how little effort most people make to improve control of their attention. If reading a book seems too difficult, instead of sharpening concentration we tend to set it aside and instead turn on the television, which not only requires minimal attention, but in fact tends to diffuse what little it commands with choppy editing, commercial interruptions, and generally inane content.

3. *Paying attention to what is happening*. Concentration leads to involvement, which can only be maintained by constant inputs of attention. Athletes are aware that in a race even a momentary lapse can spell complete defeat. A heavyweight champion may be knocked out if he does not see his opponent’s uppercut coming. The basketball player will miss the net if he allows himself to be distracted by the roaring of the crowd. The same pitfalls threaten anyone who participates in a complex system: to stay in it, he must keep investing psychic energy. The parent who does not listen closely to his child undermines the interaction, the lawyer whose attention lapses may forfeit the case, and the surgeon whose mind wanders may lose the patient.

Having an autotelic self implies the ability to sustain involvement. Self-consciousness, which is the most common source of distraction, is not a problem for such a person. Instead of worrying about how he is doing, how he looks from the outside, he is wholeheartedly committed to his goals. In some cases it is the depth of involvement that pushes self-consciousness out of awareness, while sometimes it is the other way around: it is the very lack of self-consciousness that makes deep involvement possible. The elements of the autotelic personality are related to one another by links of mutual causation. It does not matter where one starts— whether one chooses goals first, develops skills, cultivates the ability to concentrate, or gets rid of self-consciousness. One can start anywhere, because once the flow experience is in motion the other elements will be much easier to attain.

A person who pays attention to an interaction instead of worrying about the self obtains a paradoxical result. She no longer feels like a separate individual, yet her self becomes stronger. The autotelic individual grows beyond the limits of individuality by investing psychic energy in a system in which she is included. Because of this union of the person and the system, the self emerges at a higher level of complexity. This is why ’tis better to have loved and lost than never to have loved at all.

The self of a person who regards everything from an egocentric perspective may be more secure, but it is certain to be an impoverished one relative to that of a person who is willing to be committed, to be involved, and who is willing to pay attention to what is happening for the sake of the interaction rather than purely out of self-interest.

During the ceremony celebrating the unveiling of Chicago’s huge outdoor Picasso sculpture in the plaza across from City Hall, I happened to be standing next to a personal-injury lawyer with whom I was acquainted. As the inaugural speech droned on, I noticed a look of intense concentration on his face, and that his lips were moving. Asked what he was thinking, he answered that he was trying to estimate the amount of money the city was going to have to pay to settle suits involving children who got hurt climbing the sculpture.

Was this lawyer lucky, because he could transform everything he saw into a professional problem his skills could master, and thus live in constant flow? Or was he depriving himself of an opportunity to grow by paying attention only to what he was already familiar with, and ignoring the aesthetic, civic, and social dimensions of the event? Perhaps both interpretations are accurate. In the long run, however, looking at the world exclusively from the little window that one’s self affords is always limiting. Even the most highly respected physicist, artist, or politician becomes a hollow bore and ceases to enjoy life if all he can interest himself in is his limited role in the universe.

4. *Learning to enjoy immediate experience*. The outcome of having an autotelic self— of learning to set goals, to develop skills, to be sensitive to feedback, to know how to concentrate and get involved— is that one can enjoy life even when objective circumstances are brutish and nasty. Being in control of the mind means that literally anything that happens can be a source of joy. Feeling a breeze on a hot day, seeing a cloud reflected on the glass facade of a high-rise, working on a business deal, watching a child play with a puppy, drinking a glass of water can all be felt as deeply satisfying experiences that enrich one’s life.

To achieve this control, however, requires determination and discipline. Optimal experience is not the result of a hedonistic, lotus-eating approach to life. A relaxed, laissez-faire attitude is not a sufficient defense against chaos. As we have seen from the very beginning of this book, to be able to transform random events into flow, one must develop skills that stretch capacities, that make one become more than what one is. Flow drives individuals to creativity and outstanding achievement. The necessity to develop increasingly refined skills to sustain enjoyment is what lies behind the evolution of culture. It motivates both individuals and cultures to change into more complex entities. The rewards of creating order in experience provide the energy that propels evolution— they pave the way for those dimly imagined descendants of ours, more complex and wise than we are, who will soon take our place.

But to change all existence into a flow experience, it is not sufficient to learn merely how to control moment-by-moment states of consciousness. It is also necessary to have an overall context of goals for the events of everyday life to make sense. If a person moves from one flow activity to another without a connecting order, it will be difficult at the end of one’s life to look back on the years past and find meaning in what has happened. To create harmony in whatever one does is the last task that the flow theory presents to those who wish to attain optimal experience; it is a task that involves transforming the entirety of life into a single flow activity, with unified goals that provide constant purpose.