Chapter #1

INTRODUCTION

Discounting Human Nature

Most individuals will probably agree that adaptive self-organizing systems (systems that manage themselves without an imposed hierarchy or designated control mechanism) are best for dealing with a constantly changing information rich environment. However, what the majority of people still fail to grasp is that all living systems, including humans, have evolved to function independently in a self-organizing mode 24 hours a day, seven days a week.[1] Harder yet to fathom is the fact that even people in prisons, gulags, concentration camps and very tightly run top down organizations continuously self-organize in response to the demands of their immediate surroundings and conditions.

1. IGNORING A FUNDAMENTAL FACT OF LIFE

Well-seasoned folks have intuitively understood this fact for millennia. The "formal" discovery, though, that people self-organize all the time had to wait until the Hawthorne Studies were conducted at the Western Electric Company in the late 1920s and early 1930s.[2] The discovery was labeled the "informal organization" and was said to be unavoidable and uncontrollable in any social entity. It was also pointed out that these emergent systems may or may not pursue the goals formally established by an organization.

The critical question is, "If the informal organization or self-organization is a fact of life, then why isn't it one of the major topics for discussion in our executive suites?" Ignoring it certainly is illogical. If self-organization is unavoidable, then doesn't it make more sense to try to take advantage of the phenomenon and its associated dynamic factors instead of doing the

impossible by trying to circumvent it or unsuspectingly pushing it underground?

It's a fact of life (and all of us have experienced it in our places of work) that emergent informal groups, rather than people strictly complying with official policies and directives, accomplish most work in our institutions. Therefore, these evolving networks represent nearly all of the human potential of any social entity. What is most regrettable is that this "invisible wealth" remains largely untapped because it's a hidden resource that can't be tracked in the traditional sense nor is it included on any financial statements. That's a tremendous waste of human energy and novel ideas.

In the past five decades much has been learned about networks. There is now even a growing academic field called the "science of networks" that has become quite interdisciplinary in its makeup. In fact, some of the sociologists participating in this new field have developed an instrument called social network analysis and software applications such as Spoke and Visible Path that make it easier to pinpoint and diagram specific categories of informal networks within social systems.[3] As a result, efforts are currently under way to use these tools in business. Unfortunately, these experiments in industry are being employed to identify and manipulate or "manage" these casual social arrangements.

As one might surmise, that is an oxymoron. How do you manage an informal entity? It's an impossible and, for that matter, an undesirable undertaking. Once one begins to manage or control such systems they cease to be informal and serendipitously transform themselves. Thus, informal networks can't be managed in the traditional sense. Rather, the tremendous power of emergent systems can only be enhanced and amplified by a supportive organizational environment.

The well known network scientist, Duncan J. Watts, suggests that:

> Although we still don't fully understand the problem, it appears that a good strategy for building organizations that are capable of solving complex problems is to train individuals to react to ambiguity by searching through their social networks, rather than forcing them to build and contribute to centrally designed problem-solving tools and databases. The big payoff of this approach is that by understanding how individuals search socially, we can hope to design more effective procedures by which robust organizations can be constructed without having to specify the precise details of the organizational architecture itself.[4]

In *Hidden Assets* I do precisely what Watts suggests is required for "the big payoff." I propose organizational contexts and procedures from an evolutionary, biological, and neurological perspective necessary for

accessing the invisible yet powerful assets lurking below the surface of every organization.

So, whether we like to admit it or not, all activities and interactions between people are governed by the principles of self-organization. Consequently, we need to learn what some of the essential principles of self-organization and human nature are in order to draw on this powerful but invisible resource present in all our social institutions. Essentially, our goal should be to develop organizations where we practice "unmanagement" (a term I coined at an Academy of Management Conference in San Jose, California in 1993) on the people side and "manage" the inanimate objects/processes. That seems to be the most practical approach.

2. FOUR ESSENTIAL FACTORS

In the future smart organizations will recognize the criticality of the following four general factors and organize their efforts accordingly:

1. Knowledge and knowledge professionals can't be managed in the traditional sense.
2. All life forms are self-organizing systems by design, down to their individual cells and molecules.
3. All biological systems have genetically transmitted behavioral tendencies modified by their life experiences for responding to different environmental conditions.
4. The more an institution supports the principles of self-organization *openly*, the more social capital and tacit knowledge it will generate which, in turn, will lead to increased levels of innovation and entrepreneurship.

Understanding self-organizing principles is especially important when dealing with knowledge professionals. The reason for that is quite simple. The generation of knowledge is an indiscernible voluntary cooperative process as opposed to a practice where the movement of hands and feet can be observed as was/is the case with the industrial workforce. New ideas can't be forced out of people because they seldom know exactly what knowledge they possess.[5] Recent research also shows that a threatening environment, by creating negative emotions, narrows thought patterns by necessity. Conversely, positive emotions enhance more expansive and resourceful thinking essential for creativity.[6]

Further, all life forms, including humans, have one common purpose for existence and for self-organizing all their efforts around this zeal no matter what conditions they may encounter. Specifically, that innate purpose is to survive long enough to perpetuate the species by passing on the genes to the

next generation.[7] Interestingly, survival of the fittest isn't the primary mode to accomplish that common purpose. Rather, mutual accommodation among and within species and chance are the major forces that impact survival.

We're also not born with a blank slate for a mind. Instead, we arrive with all the basic rudiments of our mental circuitry in place ready to act in response to our immediate surroundings and, at the same time, we are able to learn from our experiences.[8] Thus, we are equipped not only with instincts, but also with much broader innate drives or predisposed genetic tendencies such as concern for status and for affiliation. This means that our behavior is influenced by our genes rather than genetically determined and that we do have free will.[9] As Steven Pinker so succinctly stipulates in *The Blank Slate: The Modern Denial of Human Nature*, "human nature is the problem, and human nature is the solution."[10]

Finally, it seems paradoxical but I submit that the more an institution is openly governed by self-organization or unmanagement the more essential social capital it will generate. The rationale for that is straightforward. Social capital is generated and maintained by voluntary interdependent personal connections that are mutually supportive. That, of course, is the foundation for self-organization. Such an environment also facilitates the emergence of tacit knowledge—the wellspring of all new knowledge. Thus, the hidden riches of any social system consist of a powerful triad of interdependent but invisible dynamics—*self-organization, social capital, and tacit knowledge*.

3. PURPOSE OF THE BOOK

The purpose of this book is to shed light on this seldom "explicitly" accessed triad of organizational success factors. Once people grasp the fact that individuals and groups are constantly self-organizing and that the process can't be strictly controlled, they will be able to design enterprises that are able to support the formation and functioning of these emergent systems unobtrusively. Knowing how to access and leverage these powerful forces will give any organization a much greater prospect to succeed in the turbulent global landscape.

Essentially, *Hidden Assets* presents a clear and comprehensive system for increasing an organization's capacity for generating intellectual capital (or new knowledge) and for maximizing overall "voluntary" collaboration. Clearly, only the spawning of increased levels of innovation and entrepreneurship will provide companies in industrialized nations a competitive edge in the future since low wages not only of blue-collar employees but also of highly educated and skilled personnel in less

developed countries are forcing businesses to take their work off-shore at an ever accelerating pace.

The foundation for the book is "relatively" simple and straight forward. Being a long time interdisciplinary thinker helped me to put the pieces of the puzzle together with the help of the latest research findings in various fields such as anthropology, evolutionary psychology/biology, molecular biology, neurosciences, paleontology and, of course, management. If I was a business or management "purist," I don't believe I could have put together the fundamental framework for this work.

Hence, I was intrigued by the fact no one had looked at emergent or informal networks/groups other than from a traditional perspective. That is, much has been learned about the "informal organization" (that they are always present for good or for bad) but little has been done, other than the design of the social network analysis instrument, in trying to leverage the tremendous power (at least 70% of the work in organizations is accomplished by these "invisible" groups) of these informal networks.

Consequently, in *Hidden Assets* I show how to fill the gap between management concepts based on the "observable" organizational elements such as structure, rewards, strategy, et cetera and the assortment of motivational theories requiring leaders to have a deep psychological awareness of each individual in order to motivate them to their best effort. Institutions that will make a serious effort to access their hidden human potential will not only be more productive in their endeavors but also more human friendly. After all, the interdependent triad of organizational success factors isn't just about running social institutions but about life itself.

What I have developed isn't only a new theoretical framework but also a practical guide for any social entity or individual wanting to prosper in today's Knowledge Age. Clearly, I have had to incorporate certain abstract features into the work from the latest research in multiple fields. That, of course, needed to be done to strengthen and make more explicit the overall practical framework of the book.

I'm convinced that fostering the indiscernible dynamics of informal networks will be the key to success of any social entity in the years to come. That's why I'm working with a new venture, Volitional Partners, in Silicon Valley and several very bright individuals at the Massachusetts Institute of Technology in developing a noninvasive system for tracking and leveraging the intangible elements of "the triad."

4. THE JOURNEY

Chapter Two provides a general overview of the importance for closing the gap between management concepts based on the "observable" organizational elements and the assortment of motivational theories currently being championed. Fundamentally, I demonstrate how most organizations fail to pay serious attention to the "gap" where ironically roughly seventy percent of the work is accomplished in all organizations.

Chapter Three is the longest chapter because it provides most of the scientific and theoretical background for the rest of the book. In it I reveal the most deep-seated principles for engaging people in exceptionally productive and truly collaborative efforts. In doing so, I first take a look back into our past to determine what the most successful and longitudinal method of adaptation has been in meeting the needs of social groups. That includes taking a close look at human genetic predispositions and the evolution of three primary modes for resource acquisition and distribution. Next, I explain why most of our organizations today are commonly run in a top down hierarchical rather than a democratic and self-organizing fashion. Finally, by comparing the current organizational methods to those of the distant past I propose new options for governing our social institutions more productively, creatively, and humanely.

The attention in Chapter Four is on understanding the difference between control and order. True, machines need to be externally controlled; however, all living systems innately seek order around them based on the conditions of their immediate surroundings. The myth of the Industrial Age that organizations must be structured and operated like machines has been so deeply ingrained in our minds that most people still have great difficulty in looking at social systems from a different perspective.

How to leverage the power of the "invisible guiding hand," or self-organization, within an enterprise is the subject of Chapter Five. Ironically, there's nothing new or magical about the principles governing self-organizing systems. These universal rules have been supporting our kind for roughly 200,000 years and our close cousins for several million years before that. They have helped us to survive for 99 percent of our existence on this planet. I show why it is now high time that we focus on these principles openly instead of forcing them intentionally or mindlessly "underground."

In Chapter Six I describe the positive influence of shared or "no bossing" leadership in achieving and maintaining high levels of organizational commitment instead of relying principally on member compliance. In the past, and still to a considerable degree today, people have mistaken position power with leadership. Hence, I show why position power seldom equates to

real leadership and that true leadership is about encouraging others to pursue mutually beneficial goals rather than attempting to control them.

The focus of Chapter Seven is on how an organization can more consistently recognize the best possible options to pursue when faced with endless opportunities and problems appearing on the horizon. I also illustrate the criticality of environmental scanning, real time feedback, and periodic "slack time" devoted to reflective thinking in enabling a self-organizing social system to attain its full potential. Without a relentless effort to exchange internal and external information, overt self-organization makes little sense.

In the final chapter I examine the remarkably close interdependent relationships between what I consider to be the three most decisive organizational success factors—informal self-organizing networks, social capital, and tacit knowledge. This invisible triad constitutes the untapped "wealth" of most social institutions worldwide. I also explain why simply satisfying the greed of knowledge workers or by further refining management methods of the past, organizations will not be able to reach their full potential in years to come.

Chapter #2

HIDDEN ASSETS

Have you ever wondered how things actually get accomplished in most organizations ***despite*** all the obstacles continuously encountered by the people who perform the day-to-day activities? I'm sure you have unless, of course, you are one of those rare individuals who is independently wealthy and who has never worked for someone else their entire life. Unsurprisingly, all of us also have our own individual theories why businesses survive in spite of the seemingly unworkable systems and processes they frequently employ.

Just in case you may have, for a moment, forgotten what those obstacles are let me list just a few of the most common ones in order to make sure we're all on the same page. I seriously doubt that anyone has failed to encounter at least some of the following problems:

- Unclear goals and objectives
- Ambiguous or unexplained policies and procedures
- Unrealistic deadlines and budgets
- Pressure to do more with less
- Lack of cooperation and teamwork
- Poor and uninspiring leadership
- Lack of open communications and trust

Can you imagine what the net gains would be in wealth, creativity and social responsibility that could be realized by enterprises that discovered how to leverage the hidden but powerful attributes that allow firms to make a profit in spite of the barriers mentioned above? I suggest that the possibilities are boundless. Also, mergers and change initiatives in general would be much more successful than studies show today.

At present we are firmly immersed in a knowledge economy. Hence, harnessing the talents, skills and commitment of knowledge workers (about 40 percent of the US workforce[1]) is the most fundamental challenge for business of our time. Just imagine the additional wealth that could be generated if the creative abilities of the rest of the workforce were also unleashed. Regrettably, however, most corporations (consciously or unknowingly) still insist on using the industrial model developed and refined during the past three centuries.

Certainly, businesses have become less bureaucratic in the last few decades. However, the efforts made to "empower" individuals and teams at all levels of organizations, to say the least, has been dismal. By and large, most members of firms remain disenfranchised. Thus, unsurprisingly, workers (especially knowledge workers) feel alienated from their organizations thereby causing their efforts to be limited by distrust and cynicism.

Central to the problem is the lack of models other than the standard prototypes for command-and-control systems. Unfortunately, the generation of knowledge is particularly dependent on voluntary collaboration and self-determination, foreign to the Industrial Age management mind-set. Consequently,

companies still have no *comprehensive* working models to follow for implementing "truly democratic" or self-organizing systems (not to be confused with the assortment of "flat" hierarchies currently being promoted) needed to increase the productivity and commitment of knowledge professionals or, for that matter, workers in general.

I believe I have developed precisely such a fundamental template. As a result, in *Hidden Assets* my focus is on informal or emergent social networks where, ironically, most of the work in organizations is accomplished in the first place. These invisible self-organizing systems are present in all social entities. For that reason, I've designed an all-inclusive framework that includes an array of integrated models showing how to "support" (as opposed to manage) these informal networks so that they will voluntarily unleash their tremendous energy and creativity in support of the formal goals and objectives of an enterprise.

Further, information technology and its by-product, the virtual organization, are indispensable tools for success in today's information rich and rapidly changing environment. They provide the means for instant exchange of explicit knowledge around the world. However, these tools alone are of limited value for supporting the development of social capital and "quarrying" the tacit or undiscovered knowledge residing within every individual and informal group of an enterprise.

Accordingly, organizations and individuals that want to prosper in the Knowledge Age must soon realize that commitment (as opposed to compliance) and the sharing of ideas are dependent on the extraordinarily delicate *balanced interface* between the invisible dynamics of human nature enhanced by the appropriate use of information technology. Understanding how living systems function in response to their immediate environments will allow organizations to "mine" and leverage the hidden wealth that has been ignored for so long.

5. MISSING THE MOTHER LODE

My principal center of attention is on demonstrating the remarkably close mutually supporting relationships between what I consider to be the three most decisive organizational success factors—*informal self-organizing networks, social capital, and tacit knowledge*. These emergent processes, instead of people strictly complying with official policies and directives, are the foundation for most work performed in our institutions. I estimate that the triad of unseen success factors is responsible for roughly two thirds of the effectiveness of any venture. Regrettably, these powerful invisible forces are not even partially tapped by most of our organizations.[2] Thus, they consistently keep missing "the mother lode."

For example, researchers have studied the concept of organizational "absorptive capability" (ACAP) for over a decade now.[3] ACAP is defined "as a set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organizational capability."[4] *Social integration methods* are a key component of ACAP yet, to my knowledge, no serious effort has been made to demonstrate to what extent self-organization, social capital, and tacit knowledge impact the process.

Figure 2-1 depicts "the gap" between the visible organizational components and recognized motivational schemes. In effect, ignoring or not knowing how to *leverage* (as opposed to control or manage) the three interdependent emergent forces creates a "choke point" hindering the possibility of attaining full benefits from the modifications made in the other two elements. That is precisely why most mergers and organizational change efforts fail to produce the desired outcomes in the long run. This will become progressively clearer with each succeeding chapter.

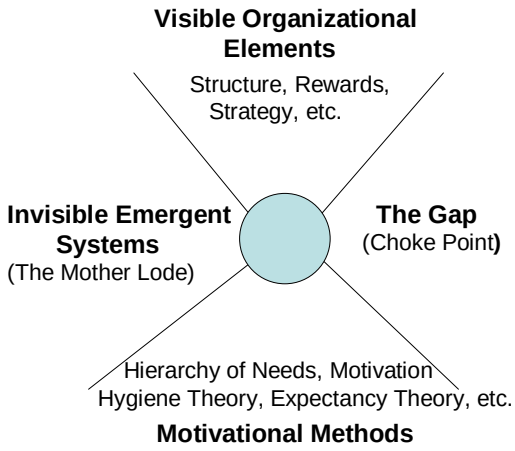

Figure #2-1. Filling the Gap

What we continue to overlook is that humans (and all other living entities) have evolved to function quite well independently without superimposed structures and motivational systems. If that was not true our kind couldn't have survived as a species as long as we have. Thus, it is high time that we also begin to grasp and leverage the innate powers of human nature in our organizations instead of continuing to almost exclusively rely on top down control processes which at best generate compliance rather than commitment. It's a costly neglect.

What is also not commonly known is that the dynamics of invisible emergent systems represents most of the human potential of any social entity. As a result, because the triad of organizational success factors is an imperceptible resource that can't be tracked in the traditional sense (it isn't included in any official financial statements) it remains largely untapped. Hence, it's not surprising that studies continue to validate that about 80 percent of all mergers fail to create the expected benefits anticipated[5], that most change efforts fall short of their targets; that some individuals can perform at 20 to 30 percent of their ability without losing their jobs; and that the average employee works only at two-thirds of his or her capacity.[6]

That is a tremendous waste of human energy and novel ideas. Therefore, in the chapters that follow, I provide the most comprehensive and practical framework to date for the development of "smart" organizations that can benefit from the invisible power and knowledge embedded within every enterprise. More than 70 years ago we "formally" identified the existence of emergent systems in our social institutions. It's now high time that we put that knowledge to practical use.

The most productive applications of my theoretical framework apply to organizations primarily dependent on new innovative products and services. The general principles, however, are applicable to any social system. Nevertheless, new possibilities require new ways of thinking. Unfortunately, old mind sets and philosophies persist long after they are productive. New ways of thinking don't just happen; they require new models which have to be learned and applied by visionary first adopters who, of course, also reap the highest returns in the long run.

My aim is to help people grasp the importance of understanding and applying the fundamental survival principles of living entities that can't be circumvented no matter how we try. Rather than attempting to dodge these unmanageable dynamics that are part of every social entity or push them underground, we need to learn how to cultivate them openly. That's the only way we can realistically quarry the invisible wealth of organizations. *More notably, self-organization, social capital, and tacit knowledge is not just about running private and public organizations but it is also about the very foundation of life itself.*

6. THE TRIAD

Fundamentally, what I have done is to pinpoint and show the *dynamic relationships* of three primary factors that are the foundation of informal systems present in all social groups including businesses. As suggested before, these *interdependent* factors are:

- Self-organization
- Social capital
- Tacit knowledge

Each of these factors has been separately written about previously, but no one has shown the synergistic power that can emanate from the balanced interplay of the forces within this triad. For example, multidisciplinary research has confirmed that all biological organisms, including humans, function in a self-organizing mode internally and externally. That is, our bodies, down to individual cells and DNA molecules, work together in order to sustain us, but there is no central "boss" to control this dynamic activity. Our relationships with other individuals also progress through the same circular free flowing process as we search for outcomes that are best for our well-being. Under the right conditions these social exchanges can be extraordinarily altruistic. Conversely, they can also be quite self-centered and even violent. It all depends on the immediate environment and the people involved.

Further, within a company the self-organizing process leads to the development of social capital or the goodwill available to individuals and groups. Social capital is generated and maintained by the voluntary structures and the contents of peoples' relationships. Its effects flow from the information, influence, and solidarity it makes available to the informal network participants. High levels of social capital make it possible for an organization to accomplish extraordinary feats without the need to acquire added resources.

Finally, tacit knowledge, the wellspring of all new knowledge, is something we all possess (otherwise we couldn't survive for a day), but we really can't delineate explicitly until we are faced with a specific problem or opportunity. Hence, when a person or group is confronted with an unusual event, tacit knowledge begins to emerge serendipitously resulting in the development of a fitting response (explicit knowledge) to the episode. Clearly, tacit knowledge can't be managed or forced out of people since it's a constantly evolving ephemeral domain. Thus, its emergence can be best supported by voluntary cooperation.

7. THE CATALYSTS

The catalysts for the interactive events among the triad of organizational success factors in my proposed system are the genetic- and experience-based elements encompassing human nature. Few people to date have "dared" to factor in genetics when developing models for organizational change and renewal. The reasons for that reluctance are clear-cut. The deep-seated characteristics of genes affecting human behavior were not well understood at the turn of the last century. As a result, false deterministic

evolutionary concepts like Social Darwinism and Eugenics were espoused and eventually taken to the extreme by the Nazis.

Fortunately recent research in molecular biology, neurology, and the Human Genome Project are helping to eradicate past and present evolutionary fabrications. Thus, at least in the scientific community, it's now widely accepted that our genes do *influence* behavior but that these influences hardly equate to genetic determinism. In essence, I've taken the fundamentals of human nature to the next level by suggesting how to make practical use of its building blocks in our social systems.

For instance, the knowledge of certain basic features of our genetic tendencies can help us develop organizational contexts that *openly* support emergent systems instead of pushing the continuously evolving informal networks underground. Such an accommodating framework will allow the power and synergy of the triad to be fully accessed. Accordingly, with the aid of an array of original interrelated models, I demonstrate how such an organizational context, I call a *shared-access system,* can be developed. As expected, the core of a shared-access system is comprised of the voluntarily unleashed energy of the triad or "hidden assets."

What I developed is not a prescriptive system where one size fits all because that's an impossible task when dealing with diverse groups of people. Every organization is unique in its make-up and operation. Rather, what I have created is a broad integrated framework founded on the latest research from multiple scientific fields. The principles I have delineated and integrated are grounded in common sense (which, unfortunately, is seldom very common) and practicality. Although I don't ignore information technology (IT) and its importance, my focus is primarily on self-organizing processes governed by *unmanagement* that must be well cultivated and appropriately supported before IT can be put to effective use.

8. FUNDAMENTAL CONSIDERATIONS

Four fundamental issues need to be kept in mind in our quest for increased commitment, creativity, innovation, and productivity in our organizations based on the principles of unmanagement. I'll explain these factors in more detail in the chapters that follow. First, we must realize that knowledge is classified into two categories: explicit and tacit.[7] You may want to refer to Figure 7-2 for a graphic representation of the dynamic interrelationships between the two types of knowledge.

Explicit knowledge is any information that has been formally defined and codified. Thus, it is usually gained through sources such as formal education, training, books, and the Internet. *Explicit knowledge is a static resource*. That is to say, it does not contain the capacity to renew itself. An outside entity needs to keep it current.

Tacit knowledge, on the other hand, encompasses ideas and abstractions at the individual level. It's acquired by life experiences and by interacting or working with more experienced people. There is also a physiological reason why tacit knowledge differs from explicit knowledge. Very simply, "…different brain systems are involved in implicit forms of memory, on the one hand, and conscious/explicit/declarative memory, on the other."[8] I'll discuss this more in Chapter Six.

Unrelated or unexpressed knowledge comes to the fore serendipitously as individuals or small groups confront new or unanticipated situations. Consequently, *tacit knowledge is a dynamic resource*. Hence, although relatively stable, implicit knowledge continues to be shaped by our constant interactions with our immediate surroundings and other people. Most importantly, unconnected know-how is the wellspring for all new knowledge.

Clearly, there is a circular cause-and-effect relationship between the two categories of knowledge. Explicit knowledge (a specific event or a newly published theory) triggers fresh ideas (tacit knowledge), which then leads to the development of more codified information that can be applied productively. Thus, implicit knowledge must first be made explicit before it can be put to practical use.

It's important to remember that tacit knowledge must be allowed to *emerge* through voluntary collaboration or self-organization. It can't be forced or managed out of individuals since people seldom are aware of exactly what unrelated knowledge they possess until confronted with a problem or an opportunity where they perceive themselves to be a key participant.

Therefore, in order for tacit knowledge to be able to properly emerge, people must first be surrounded by a supportive environment. Threats, for example, create negative emotions that, by necessity, narrow thought patterns.[9] People threatened by the loss of their jobs, a bullying boss, not knowing what their status is from day-to-day and so on instinctively narrow their thought patterns to avoid or eliminate these negative emotions. As a result, such individuals unconsciously devote little or no time to engage their minds more expansively and resourcefully in search of new ideas.

This leads us to the second essential issue for enhancing productivity and knowledge generation—human nature. Without thoroughly understanding who we are as biological systems there is little hope of developing a well functioning learning organization. Unfortunately, for roughly the past century, our focus has been almost exclusively on the purely psychological aspects of human nature. That is, we have been primarily concerned with how the environment molds our neurological framework as if our brains are a blank slate when we are born. Hence, we have almost completely ignored, until very recently, the biological or genetically transmitted side of our mental response systems.

The latest scientific evidence shows quite convincingly that it is a fifty-fifty proposition between our genes and the environment in forming our personalities and modes of behavior. Therefore, we are not born with a blank slate for a mind to be completely shaped by our surroundings, but rather we come equipped with certain predisposed tendencies, which are expressed or not expressed (also strengthened or atrophied by constant employment or non-use) depending on our immediate environmental context. Clearly, our experiences have an affect on our behavioral tendencies but so do our genes. What must be thoroughly understood is that the most recent research doesn't support the notion of genetic determinism. Rather, it suggests that our behavior is *genetically influenced* and that we do have free will.[10]

If we use a multi-story building as an example of our neurological system, then we have until very recently concentrated almost our entire focus on the middle floors to the penthouse. It is now time that we pay attention to the entire building from the basement up in designing and running our organized efforts. James Watson, President of Cold Spring Harbor Laboratory, has made it quite clear where we are headed genetically as far as psychology is concerned. According Watson:

> The next century will bring together biology and psychology. In the past, I never wanted to learn psychology because I didn't think its proponents had a solid basis for what they claimed. Now we're going to begin to understand behavior from a genetic perspective.[11]

In essence, we should begin to appreciate the significance of the "invisible guiding hand" (self-organization) in our day-to-day activities and interactions.

Fundamentally, we are born with two basic categories of innate drives (genetic predispositions that are considerably less reactive than pure instincts), a set of *self-centered drives* (e.g., concern for control, rank, status, territory, possessions) and a set of *other-centered drives* (e.g., concern for attachments, affiliation, altruism, care-giving, care-receiving). Humans function best in an environment where they are able to express both categories of drives in a balanced manner.[12] That will be clarified in Chapters Three and Five.

Unsuspectingly, most of today's organizations, with their prevailing top-down management systems, are mainly impacting their people's self-centered drives as they seek out their best discernible ***individual*** survival alternatives. Simultaneously, their leaders are asking these individuals to be good team players and deeply committed to the goals of the enterprise. Obviously, this is not an effective way to run knowledge based institutions where the development of social capital and the exchange of tacit knowledge is the key to success and, therefore, the other-centered drives also need to have an opportunity to be expressed.

We are born with the capacity to anticipate and to respond to changes in our immediate environment in addition to learning from our experiences. So, whether we like to admit it or not all activities and interactions between people are governed by the principles of self-organization. Therefore, we need to learn what some of the essential principles of self-organization and human nature are in order to draw on this powerful but invisible resource present in all our social institutions.

At this juncture you may want to take a moment to reflect on your own experiences in relation to the invisible triad of organizational success factors alluded to above by beginning to search for answers to the following questions: "How often have you accomplished something noteworthy and creative that made a very positive impact in your place of work by strictly following official policies and procedures?" "Why did you 'voluntarily' seek the counsel or aid of certain individuals/groups and not of others while working on a memorable project?" "What were some of the creative and innovative ideas that 'emerged' in your collaborative efforts?"

The third critical factor in developing knowledge-intensive enterprises is size. There is now ample evidence that human beings are physiologically incapable of developing and maintaining mutually beneficial *voluntary* collaborative relationships within groups much larger than 150 people.[13] In larger collectives, relationships become fragmented, ties of common interest can't be properly sustained, and hierarchical structures begin to creep in.

Consequently, from a human nature perspective, small size is absolutely essential for the development of positive environmental contexts where informal groups and networks can flourish *openly*. What this also implies is that *capitalism without a strong sense of community ultimately can lead to unrestrained greed* as exemplified by the Enrons and WorldComs. Humans are not fundamentally "noble savages" nor are they uncompromisingly self-indulgent. We are capable of both extremes given the appropriate surroundings. By no means, however, do I mean to imply that large institutions can't benefit from the dynamics of small groups. I will expand on this point later in the book.

Finally, what we also need to set aside are the two persistent myths about pecking orders or organizational chains of command. Hierarchies are necessary in certain situations but they are not appropriate for all social endeavors. The problem with a hierarchy is that it is founded on two false assertions that also serve as the foundation for its advocacy. The first premise suggests that hierarchies are an unavoidable phenomenon among humans. This argument is true only if we prefer to rely primarily on the most primitive drives of the lowest level of our three-tiered brain—the reptilian complex that evolved more than 500 million years ago.[14] If we believe that humans are more intelligent than reptiles, it would make more sense (at least occasionally) to rely on our characteristically human social side, especially with respect to creativity and innovation.

The second contention supporting the hierarchical model is grounded in the belief that social organizations should be structured in accordance with a mechanistic or machine metaphor. That is, organizations should be developed and run like well-oiled machines. Engineers and economists initiated this philosophy during the Industrial Revolution. The problem with this premise is that it confuses control with order. People are not machines by any stretch of the imagination. Machines need to have external control mechanisms. People naturally self-organize around any situation or opportunity, thus establishing situation-specific order.

What are the implications of what we have covered so far? The four fundamental issues outlined above suggest that the Knowledge Age demands that we understand what drives us and learn not to waste time and money trying to circumvent human nature. By understanding our inherent genetic predispositions and how the environment affects them, we can begin to leverage the tremendous power that resides in the invisible parts of every organization. Without recognizing the vitality of the hidden social dynamics, organizations will continue to curb their capabilities in the years to come. *We need to recognize that life by and large is good when one pursues things that are good for life in general.*