

**Thinking and Planning for the 21st  
Century**

**Wayne M. Hall  
October 1994**

# A holistic approach to thinking and planning

---

## Our immediate quest -- dealing with change

We have no rights to isolated acts of any kind: we may not make isolated errors or hit upon isolated truths. Rather, do our ideas, our values, our yeas and nays, our ifs and buts, grow out of us with the necessity with which a tree bears fruit -- related and each with an affinity to each, and evidence of one will, one health, one sail, one sun. Nietzsche

As human beings prepare for the 21st century, we have to ask ourselves a fundamental question: Can we effectively adapt to change enough to survive in the future? If we have intellectual and moral integrity, we have to answer the question with some equivocation and varying degrees of skepticism. It's quite clear that some of today's problems are growing so much that they seem intractable. Our consciousness recognizes problems in our government, our ecology, our livelihoods, our legal system, our social system, and our morality, to name but a few. Our problems threaten our ability to adapt to the future.

As a society and as individuals, we're faced by overwhelming complexity. The complexity is atypical from anything the human race has faced throughout the annals of history. Growing complexity has several adverse effects. It causes confusion. Complexity thwarts understanding of relationships and depth of thinking we need for increasing our understanding of what change means. Also, complexity retards our ability to adapt to fast-changing situations. The complexity facing us has two potential outcomes earning primacy among many. (1) We can adapt, use the complexity to our advantage, and shape the future. Or, (2) we can let change drag us along into the future allowing complexity to create great alienation among our people and causing our society to implode, destroying itself in the process.

How people face the gathering storm clouds of complexity is quite interesting. Some people withdraw and fail to cope. Others valiantly claim that the age we live in is really no different than the ages that have evolved. Others ardently believe complexity to be a myth -- these people ingest the habit-forming opiate of the status quo and its attendant seductive powers of stasis. Still others suffer collective angst -- a mournful wailing, largely silent but loudly outrageous to our collective subconscious, but whose power manifests itself clearly as the violent, valueless, intellectually vapid, narcissistic trends toward which our society evolves.

I believe we must change the way we think and plan -- our success in this effort will influence our survival as a culture. Change in this context involves two concepts -- coping and shaping. **Coping** is passive, something one does without a lot of intellectual energy. **Shaping**, however, is an active process, a process that requires expending intellectual energy. I must preface my discussion at this point with the disclaimer that nothing is drastically wrong with the way we've traditionally thought and planned. But we must be honest with ourselves and realize that what was good enough in the past simply won't work in the future -- particularly in future in which the information revolution, technological advancements, and rapid, complex change are sure to dominate.

How can I be so bold as to make such an assertion? By ways of evidence, signs of needed change appear, if we look, in all walks of life. We are confused and frightened about the assault on our senses brought about by the advent of mass media, violence, global connectivity, social issues, ecological disasters, war, famine, pestilence, and death. We are confused about the search for truth. Not only does truth change, but in some circumstances, *there is no truth*.

Let me provide some facts to buttress my premise. We face, for example, the societal hypocrisy of living in a land of milk and honey but in a land where one can't stroll through the streets of our cities without stumbling over begging, destitute, waifs and adults. We live in a land where our populace has enormous and important freedoms, yet our prisons overflow. We live in a land of tremendous affluence, but 15% of our people live below the poverty level.<sup>1</sup> We also live in a land with a growing underclass in our large cities, an underclass whose ethos is despair, whose daily way of life is violence, and whose salvation lies in endless cycles of substance abuse. We live in a land where many of our citizens reside in a wall-less ghetto whose inhabitants are just as surely trapped and doomed as Jews of

the Warsaw ghetto in the 1940s. It takes neither wisdom nor acute powers of observation to conclude that our society is in trouble.

We live in a land with increasing numbers of people, many of whom are very bright and successful, have few thoughts and fewer scruples. They are the soulless whose existence mars every age but who are particularly dangerous in the age of the information revolution. These people have no goal other than the emptiness of trying to get rich. They are smart enough to make a difference, but who have bound themselves to greed and selfishness.

We live in a society that faces an awesome revolution in information and technology, and populated with human beings who, for the most part, just hang on, remain confused, and desperately want to participate again and be functioning citizens. We live in a day and age when information and technology proceed regardless of anachronistic organizations, problem solving, thinking, and planning. I fear if we don't change, if we don't adapt, if we don't use the great creative and intellectual forces lying fallow in the fields of our collective beings, we'll become as extinct as the dinosaur.

Even with the reality of the negative evidence I just presented, I can't help but believe we have the potential to do better. We have the potential to alter our thinking and shape our future. I'm very optimistic about the future of the human species because of our ability to think and alter the way we do things. I'm optimistic because for every act of violence, I hear about 20 acts of kindness. For every person living in a homeless, abject poverty situation, people are doing their best to help those in need of help. We have a determined, inventive society that will eventually right some of the wrongs that seem so self-evident. I have hope; therefore, I offer a few of my thoughts as a way of helping us deal with the exigencies of change and the future.

Regardless of my optimism, we need to adapt our thinking to cope with the dizzying pace of change accentuated by advances in information and technology. We can't continue to think about things in isolation, failing to capture and use the powers of synergy. We can't continue to think through analysis alone instead of analyzing **and** synthesizing. Moreover, we need to change the way we plan. We can't continue to plan as we have in the past -- emphasizing the short-term over the long-term; failing to think about, recognize, and cope with short- and long-term effects; failing to understand the true essence of problems; failing to understand the

difference between understanding and knowing; and engaging in endless reductionist thinking.

I've developed an approach that presents a new way to think and plan. I believe it's the way we need to move into the next century positively, shaping and designing change, rather than being torpid, witless, helpless victims of change. I offer this paper for your thought -- to discuss, debate, argue, accept, deny -- but, what I truly hope for those who disagree, is that they come up with a better, more intelligence way to cope with the future and the overwhelming problems that face the human race. If such approaches surface, I know that I will have succeeded beyond my wildest hopes.

---

## Some opening thoughts

Two souls, alas are lodged within by breast, which struggle there for individual reign: One to the world, with obstinate desire, and closely-cleaving organs, still adhere: Above the mist, the other doth aspire, with sacred vehemence, to purer spheres. Oh, are there spirits in the air, who float 'twixt heaven and earth dominion wielding, stoop hither from your golden atmosphere, Lead me to scenes, new life, and fuller yielding! Goethe

As a way of starting along the path of advocacy of change in thinking and planning, I must offer a few words on my philosophy. I believe that change is like wind, strong and aberrant, shifting constantly and shaping our collective destinies. The winds of change assault and eventually fragment our status quo and our existing realities -- sometimes slowly, sometimes rapidly. Change remains frightening. It's something that happens and that we have little control over. Out of necessity we usually cope with and adapt to change rather than shape it. Coping takes little effort; shaping takes a lot of effort.

With change comes chaos -- change tears apart established status quo, and leaves us with an existence that can never be the same again. Within change-induced chaos, however, lies the arcane synthesis of wisdom, collective intellect, and synergy. All we have to do is synthesize disparate elements of change-induced chaos into meaning and a higher order of thought.

With the advent of change, we often experience the familiar, empty feeling of knowing something is gone or changed and being frustrated that we can't do anything about it, much like the empty feeling we have when a loved one dies. If change is slow and methodical, we generally can cope and adjust by changing the way we view the environment, adjusting to circumstances, and putting together pieces fragmented by change. Such is one of the true blessings of being a human.

With rapid change, however, the human equation changes. It's the negative side of being human that we can't change rapidly enough to cope and adjust. Instead, we suffer from individual and aggregate angst. With rapid change, we don't have opportunities to put change-induced fragmentation back together.

Yet, there's hope. Even with the chaos that change-induced fragmentation brings, coalescing forces can gather fragments together into new wholes, into new meanings. To coalesce change-fragmented entities into wholes, we must understand nuance and synthesize related bits and pieces of information into wholes. What inhibits this process, though, lies in our intellects. Our intellects typically don't synthesize bits and pieces of information with ease, particularly those that seem disparate. We also have trouble understanding coalescence because it's intangible, something we cannot quantify. Without quantification, we have great difficulty believing. We must believe to be able to understand. Coalescence must involve nuance and quantification to be meaningful.

The complexity and rapidity of change thwart our efforts to think and plan as we should to shape the future. Our environment grows increasingly difficult to live in because of ever increasing complexity. Our environment though, presents three interesting intellectual implications.

- **First**, we need to learn to think better about wholes and relationships as ways to understand our environment, regardless of complexity.
- **Second**, the abstract, yet real, mental constructs of wholes and relationships provide an approach to shaping our futures.
- **Third**, we can move into the future *progressively* instead of *reactively*

I believe thinking and planning provide about the only ways to cope with complexity and associated bewilderment rapid change causes. Traditionally though, thinking and planning receive short shrift even in our daily lives and organizations. We should ask ourselves why. We've

become the sound-bite generation, looking for simple solutions without mental travail. With the simplicity brought about by sound bites, we lose our ability to think in sufficient depth to understand and use complexity, let alone change. It follows that in the aggregate our thinking has suffered a serious degradation.

Typically thinking and planning don't receive much attention. They deal with a mysterious future, contribute only to quixotic solutions, use "soft numbers" if quantification is even possible, evolve rather than remain stationary, and involve generalities instead of specifics. Also, thinking and planning often reduce complexity into such simplicity that relationships and complex wholes either can't surface or surface as foolishly simple.

In the thinking and planning ethos of our globe, human beings fail to search for and understand relationships. Without relationships, it's difficult to think about effects. Adding to the problem, people often experience difficulty understanding long- and short-term cause-and-effect relationships. We tend to ensure the existence of the forces of isolation and alienation that come with an incessant focus on quantitative goals, events, and outcomes at the expenses of relationships and wholes.

---

## What can we do?

What should the solving of Nature's secrets be?...If you wish to advance into the infinite, explore the finite in all directions. If you desire refreshing contemplation of the Whole, you must discern the Whole in the smallest of things. In the infinite the same events repeat themselves in eternal flux, and the thousandfold vault of the heavens powerfully conjoins with itself, and then the joy of life streams out of all things, out of the smallest and out of the greatest of stars...<sup>2</sup>

Because of an increasingly complex environment and the demanding aspects of change, **we must modify our current methods of thinking and planning.** Thinkers and planners in the 21st century must seek relationships, understand wholes, seek relevance, and strive to create the conditions that promote synergy. I call this type of thinking and planning **holistic thinking and planning.** When we use holistic thinking and planning, we can think and plan with methods we've used successfully in the past and combine them with a synthesis-driven, holistic approach to

thinking and planning. Holistic thinking and planning seek multiple paths to shape the future. Holistic thinking and planning combine entities. This type of thinking takes advantage of detailed analysis then synthesizes the results of analyses into wholes. The end-result of the process answers the question, "So what?" and provides meaning to apparently meaningless data. It seeks understanding, not just knowing.

---

## The way we were

You must, in studying Nature, always consider both each single thing and the whole: nothing is inside and nothing is outside, for what is within is without.  
Make haste, then, to grasp this holy mystery which is public knowledge.  
Goethe

Effective thinking and planning enable order to surface in chaos. Order and its principal side-effect, stability, provide people a way to cope with a bewildering, complex environment -- the real world. To be effective, thinking and planning have to relate to the real world.

A plan provides a means of orienting the future; it's a path or design to accomplish goals, objectives, or an end. The words 'path' and 'design' suggest thinking. Thinking and planning can't occur without thought, but whether or not thinking is good or poor is a subjective judgment. An important adjunct issue to this inquiry quickly arises: What does thinking involve?

Typically, thinking involves some form of analysis, "a separation or breaking up of a whole into its fundamental elements or component parts."<sup>3</sup> Atypically, thinking involves synthesis, which is, "the combining of often varied and diverse ideas, forces, or factors into one coherent or consistent complex."<sup>4</sup>

I believe decision-makers and planners analyze better than they synthesize because our society emphasizes analysis and rewards those who rely on non-relational statistical analyses, reduce problems into simple parts, and draw inferences in isolation from relationships. For most people, analysis comes more naturally than the higher level thinking skill called synthesis. Typically, because of our number-oriented proclivities, we draw conclusions and lay our plans from reduced and compressed data. It's at



this point that the traditional process of thinking and planning breaks down and causes me such concern. Normally, planners don't do well in putting reduced data back into wholes or to find relationships -- engaging in a higher level of meaning to seek and find understanding, thus meaning.

Typically, people fascinate themselves with statistics and numbers, with knowing but not necessarily understanding. They seldom combine the results of analysis to search for broader meanings and discover relationships.

Unfortunately, people learn to analyze but don't learn to apply the results of their analysis to promote the ascendancy of meaning. Typically, we analyze things in isolation, neither searching for nor understanding that through the results of analysis we could synthesize things into wholes, gain broader meaning, and understand relationships.

Typically, thinking orients on the short-range. The *primacy of needs of the moment* strikes a chord in the hearts of those who have worked in high-pressure jobs whether it be the military or business. After all, how can we engage in the long-term when we stand the risk of ruin in the short-term. Besides, the immediate is easier to deal with than a much more ambiguous and foggy long-term. Emergencies and requirements for immediate success or profit influence thinking and planning rather than the future and extant implications of causal effects.

Atypically, thinking involves a broader perspective and long-range focus. Typically, thinking flows linearly, uses analogy, and extrapolates from historical trends. Atypically, thinking involves originality and creativity, "...the quality of originality that leads to new ways of seeing and novel ideas... a thinking process associated with imagination, insight, invention, innovation, ingenuity, intuition, inspiration, and illumination."<sup>5</sup>

Managerial expert Peter Drucker captures the implication of this thought:

But tomorrow always arrives. It is always different. And then even the mightiest company is in trouble if it has not worked on the future.... It will neither control nor understand what is happening. Not having dared to take the risk of *making the new happen* [italics mine], it perforce took the much greater risk of being surprised by what did happen.<sup>6</sup>

---

## The heart of the matter

... man is a frivolous and incongruous creature, and perhaps, like a chess player, loves the process of the game, not the end of it. And who knows...perhaps the only goal on earth to which mankind is striving lies in this incessant process of attaining, in other words, in life itself, and not in the thing to be attained, which must always be expressed as a formula...<sup>7</sup>

We often think by the process of reductionism: "a procedure or theory of reducing complex data or phenomena to simple terms."<sup>8</sup> Reductionism provides a way to explain complex situations. On the dark side, reductionism helps account for our seemingly endless string of thinking and planning faux pas that have caused surprise, unforeseen effects, and unanticipated consequences. Reductionism produces isolated analyses. Seldom do we take the next steps of searching for relationships and combining the results of analysis through the thought process called synthesis. Facts become ends unto themselves, without relationships and relevancy.

Reductionism and pure analytical thinking are inseparable. Nothing is inherently wrong with analytical thinking unless it occurs in isolation, failing to seek meaning and relationship. Analytical thinking finds facts and increases knowledge. But analytical thinking easily and seductively becomes an end unto itself. It follows, then, that we need to take another step in our thinking and habitually combine the results of analysis into a whole, find meaning and relevance, and use analysis to complement thinking critical to creativity: *synthesis*.

Two primary reasons cause reductionism to be so dangerous.

- **First**, reductionism parses phenomena into their simplest states. Simple views can lead to overly simplistic thinking and short-sighted, ineffective thinking.
- **Second**, reductionist thinking causes planners to concentrate on the means to attain ends instead of focusing on the overall goal.

Reductionist thinking causes the *process to become preeminent instead of the desired goal*

Reductionist thinking typically takes a short-term focus at the expense of long-term effects. Problems with our politicians provide an example. Political solutions offer effects for the short-term, for the sake of political expediency. Politicians know Americans' proclivity for the quick-fix, short-term, simple, painless solutions to complex problems. Thus, politicians don't offer truly holistic and future-shaping plans. Their solutions provide marginal, short-term results at best. Holistic plans that lead to long-term economic solutions, for example, involving investing in capital machinery, investing in research and development, repairing our infrastructures, and developing education to make us competitive in the future are on the mark and correct; but these solutions are politically inexpedient. Because political expediency obsesses our political leaders thinking and planning, long-term effects sacrificed for short-term expediency reduce competitiveness and accentuate our pressing economic problems.

Our experience in Somalia is an example of what can happen when reductionist thinking dominates the minds of our decision makers. Somalia seemed like a very simple problem. Go, provide people food, get out. Simple. The Somalian society was ignorant, poor, uneducated, and backward. It's been an economic and social basketcase for years. In effect, however, Somalia proved to be very complicated -- complicated in its own right and complicated because of its relationships with the world. Within Somalia itself, social, economic, military, and political forces were extraordinarily complex.

The complexity of the United Nations, linkages with mass media connected globally, and volatile political situations in the U.S. and other countries proved to be catalysts to an already volatile and complex situation. Our proclivity for reductionist thinking led us to believe the mission would be a simple easy-in /easy-out task. What we failed to realize was that simplicity doesn't exist and that we must think about relationships and long- and short-term effects of what we do. No matter how backward, no matter how dissimilar from the swirling cauldron that comprises the United States, we can't reduce a complex society into simplicity without peril.

When thinking and planning in a reductionist, short-term fashion, additional debilitating results occur. Our plans have little relevancy and continuity with the future. Reductionist, short-term plans don't deal with the process of perpetual change. Change causes turbulence and chaos, which, in turn, causes incoherence. Rather than develop plans flexible

enough to adjust, planners wait, then react to change. They rely on taking advantage of opportunities rather than creating them. Their plans often fail.

Plans also fail because of variables and surprise. Without synthesizing the results of analysis into wholes, searching for relationships between wholes, and using the energy of change, planners inevitably **react** to perturbations. Reaction is negative; it consumes intellectual energy rather than creating it. Thus, confusion rules and paralysis surfaces, wielding great influence on the minds of thinkers and planners.

Last, rigidity dominates reductionist thinking and planning. The over-simplification that characterizes reductionist thinking and planning contributes to rigidity. Over-simplified plans don't have feedback mechanisms enabling adjustment while a plan unfolds because the ends and means appear very simple -- expediency and regimens obscure complex relationships. Sir William Slim, a famous British World War II commander tells us, for example, that Japanese military planners in the Burma Theater were inflexible. They didn't plan for unexpected, chance events and couldn't adjust once affected by their inevitable surfacing. After their forces started enacting a plan, they couldn't react well to friction or variables. The original plan often dogmatically ruled even when the situation warranted change.<sup>9</sup> As a result, Slim and his planners easily forecast their activities and responses to change. Japanese rigidity led to failed plans and inevitably their doom.

---

## Foundations of holistic thinking and planning

But the sight of the uncultured individual is clouded, as the Hindus say, by the veil of Maya. He sees not the thing-in-itself but the phenomenon in time and space, the *principium individuationis*, and in the other forms of the principle of sufficient reason. And in this form of his limited knowledge, he sees not the inner nature of things, which is one, but its phenomena as separated, disunited, innumerable, very different and indeed opposed.  
Schopenhauer

There is a natural unity in all things.<sup>10</sup> Take, for instance, a simple hologram. If a scientist illuminates part of a hologram, it represents the whole from which it emanates. The part, however, isn't as clear or representative of the whole as the whole itself.<sup>11</sup> The hologram helps us

comprehend unity, understand a larger whole, and combine pieces of a whole in ascending levels of clarity and coherence in relationship to a larger whole.

The order and unity of nature serve as underpinnings of holistic thinking and planning. The following passage provides us a glimpse into the unity and interworkings of nature.

In the heaven of Indra, there is said to be a network of pearls, so arranged that if you look at one you see all the others reflected in it. In the same way each object in the world is not merely itself but involves every other object and in fact is everything else....<sup>12</sup>

Nature consists of webs of relationships. Linkages connect the webs. Webs of relationships and linkages show up in our world as subtle and discernible patterns. It follows that thinking and planning should copy nature and emulate its natural coherency, and strength. Similar to the mythical network of pearls, the ordinary cobweb serves as a useful example of unity and relationship in nature.

We can call a cobweb's constituent parts cells; cells connect and relate to each other physically and abstractly. Each cell contributes to the purpose of the whole web. But a cell's strength lies in its interconnectedness with other cells and the whole. If a cell breaks or weakens, the cobweb loses proportionate strength. If cells remain combined through strong links, the cobweb has strength --stronger together as a whole than a single cell or the simple sum of cells.

This metaphor suggests the importance of discovering then strengthening links, and finding relationships in holistic thinking and planning. It also suggests that in holistic thinking and planning, the whole is more powerful than the sum of its parts.

Links connecting wholes, oddly enough, form an interacting whole of strengths and vulnerabilities. Links identify relationships between wholes, making them a critical component of any holistic plan. On the other hand, opponents can attack our wholes by attacking links. Links identify conduits for creating the effects of surprise, variables, or friction (chance events).

The universe continually actuates and changes. This process occurs through the interaction of two opposites -- fragmentation and coalescence. Nature continuously changes through fragmentation. Fragmentation causes chaos. We perceive chaos to be dysfunctional, but within chaos wisdom exists. Chaos causes disequilibrium and dissonance. Our

inexorable search for meaning and order presents the potential for synthesizing fragments into meaning. Meaning leads to wisdom.

Uncomfortable with confusion and dissonance, our minds strive to put bits and pieces of information into wholes, combine wholes with other wholes, and discover meaning. In our thinking, we consciously and subconsciously strive to coalesce fragmented pieces into wholes in a never-ending cycle. Our minds attempt to make sense out of chaos by searching for patterns and developing understandable combinations through this process. This thought process though, doesn't come to fruition because when we engage in reductionist thinking without purpose, we tend to stop thinking before achieving synthesis.

The Chinese theory of the interaction of opposites contends that everything has contradiction within it -- the seeds of its opposite. Because of change-induced interaction, contradictions arise, fomenting the ascendancy of the opposite. After an opposite becomes preeminent, its opposite starts to ascend. This process involves the wonderful dance of energy that nature employs to ensure that living things never stagnate. Chinese philosophers call this process the interplay of yin and yang. Sun Tzu brought the interaction of opposites to the art of war as the interaction between the normal and extraordinary forces,

In battle there are only the normal and extraordinary forces, but their combinations are limitless; none can comprehend them all. For these two forces are mutually reproductive, their interaction as endless as that of interlocked rings.<sup>13</sup>

Chinese philosophers believe that discernible shapes make up the flow and change inherent in nature.<sup>14</sup> In our western way of thinking, we have to learn to understand shapes by searching for their existence or creating them. We create shapes by discerning wholes, combining them, synthesizing pieces of wholes into aggregates, and causing the shapes to work together to reach a desired outcome.

Another theorist of war, Clausewitz, provided additional insight into holistic thinking and planning and combining wholes with larger wholes. Clausewitz thought of the battlefield as a whole.<sup>15</sup> Closely related to his notion of battlefield wholes, Clausewitz suggested that defense and offense form a whole of a battlefield. Within this context of a battlefield whole, Clausewitz postulated that the defense was the stronger form of war though it had a negative aim and the offense a positive aim. Since the defense relates to the offense, interacting to form the battlefield whole, neither can exist in isolation.

Interestingly, a defender, with the negative force, gains strength through recoiling like a spring and conserving energy, while the attacker, with the positive force, loses strength through expending resources while attacking. The defender, when launching an attack from a coiled position, then assumes the offense in the form of counterattack, with a newly found positive aim, while the former offense now assumes the defense with a negative aim. These two elements of the whole constantly interact and change, and are composed of countless battles and engagements in which defense and offense constantly mix and interact. That is why conditions are so important. Conditions influence how the pieces of the battlefield whole interact, playing out their inevitable outcomes.

Clausewitz's trinity of war provides insight into what planners need to understand, how wholes relate to each other, and how wholes should combine to achieve maximum power and coherence. The trinity of war -- hatred and passion, rationality, and chance and creativity -- forms an abstract whole of war. Each part of the trinity relates to, and in fact depends upon the others. Clausewitz postulates that each part of the trinity should balance with the other parts, otherwise war could end differently from what was intended.<sup>16</sup>

Because parts of the trinity of war are so interdependent, they are symmetrical. When one or two parts of the trinity dominate and the trinity becomes asymmetrical, the whole of war becomes unbalanced. Without balance, the three elements can become chaotically asymmetrical, with one aspect dominating either or both of the others.

The predominance of military means over political ends in World War I serves as an example of how chaos and incoherence can reign, obscuring even the most obvious dialectical contradictions, when parts of the trinity become asymmetrical. Coherency of the ideal -- controlled passions, military means kept under control by the political end, and a rational government providing that political end -- can easily tilt out of control. In effect, because of asymmetry, passions can dominate over rationality, which enables military means to gain ascendancy over political ends.