



Mind, Thinking and Creativity

Janani Harish

Associate Fellow, World Academy of Art & Science;
Senior Research Analyst, The Mother's Service Society, India

Abstract

Global civilization is the product of diverse cultures, each contributing a unique perspective arising from the development of different mental faculties and powers of mind. The momentous achievements of modern science are the result of the cumulative development of mind's capacity for analytic thinking, mathematical rendering and experimental validation. The near-exclusive preoccupation with analysis, universal laws, mechanism, materialism, and objective experience over the past two centuries has shaped the world we live in today, accounting both for its accomplishments and its insoluble problems. Today humanity confronts complex challenges that defy solution by piecemeal analysis, unidimensional theories, and fragmented strategies. Poverty, unemployment, economic crisis, fundamentalism, violence, climate change, war, refugees, reflect the limitations and blindspots that have resulted from a partial, one-sided application of the diverse capacities of the human mind. Human monocultures suffer from all the limitations as their biological counterparts. There is urgent need to revive the legitimacy of synthetic, organic and integrated modes of thinking, to restore the credibility of subjective self-experience in science, to reaffirm the place of symbol, analogy and metaphor as valid ways of knowing and communication in education, to recognize the unique role of the individual in social processes, to recognize the central role of insight and intuition in science as in art. This article examines themes presented at the WAAS-WUC course on Mind, Thinking and Creativity, conducted at Dubrovnik in April 2016.

The Symbol Dawn

*"Then something in the inscrutable darkness stirred;
A nameless movement, an unthought Idea
Insistent, dissatisfied, without an aim,
Something that wished but knew not how to be,
Teased the Inconscient to wake Ignorance."*

— Sri Aurobindo's *Savitri*

The lines from the poem *Savitri* symbolically describe the awakening of a new consciousness on earth. First there is the darkness, inscrutable and ignorant. Then something stirs, originating from a dissatisfied, insistent idea. In the beginning, it is a nameless movement that does not know how to be, yet it wishes, and teases the inconscient awake. This dawn

that signals the commencement of day symbolizes the birth of every idea, movement and era in human history. Like the first faint rays of dawn that appear in the horizon and gradually rise to a glorious splendour, an idea born grows in strength and establishes itself firmly in the minds of men and women. Human civilization has seen this dawn, over and over again, across millennia.

The early humans had one occupation, survival. All their mental faculties were focussed on the bare physical requirements. They ate what fruit they could find, and what animal they could hunt. They sought protection from the elements in caves and what shelters nature provided. They came together and lived and worked in groups. They tried to understand nature, then imitate it, and gradually gained mastery over it. This slow process of the evolution of human civilization is an expression of the underlying evolution of mind in humanity.

One of the first stages in the development of mind in humans is seen in the creation of tools. There have been in the animal kingdom very primitive instances of tool making. But we are the first species to make increasingly intelligent and sophisticated tools. Thought is the ability to coordinate or see a relationship between two apparently unrelated facts. When early man saw a stone on the ground, remembered his requirements during hunting, and saw the use the stone could be put to, he was thinking, like no species before had done. Michelangelo said that in every block of marble, he saw a statue as plain as though it stood before him, shaped and perfect in attitude and action. He had only to hew away the rough walls that imprisoned that statue. The early man similarly saw, much before the sculptor, that sharpening and polishing the stone, and fixing it to the end of a stick would give him a spear, which would make his hunting safer and more effective. This symbolized the birth of the mind. Primitive tools that made life easier were fashioned from stone and wood. Clothing was fashioned from plants and animals. Houses were built. Tool making marked the transition for humanity.

The natural progression of the mind was from observation to mimesis, the capacity to observe and imitate those around. Humans learnt to swim like the fish; birds inspired flight. Animal skin provided clothing, their fur kept people warm. People also imitated each other, which is the main source of the spread of new behaviour.

Moving from seeing the relationships between two objects to seeing that one causes the other is a more advanced stage in the ascent of mind. This was a very important phase in evolution, one that resulted in agriculture. Acute observation over years, centuries and millennia enabled human beings to discover how the seed sprouted, grew into a plant or tree, and bore fruit which contained more seeds. Mere observation was not enough, one had to be able to discern the causal relationships, between the tree and all its parts, the soil, water, sun and season. This progress in the faculty of the mind, from seeing correlations to understanding causation meant that people did not need to go in search of food anymore.

“Thought is the ability to coordinate or see a relationship between two apparently unrelated facts.”

Farming and animal rearing enabled them to give up their nomadic lifestyle and settle down. Villages sprang up. Excess produce was exchanged or sold, and trade developed.

The history of civilization is an expression of the development of many mental capacities at different levels: the ascent of mind from observation and imitation to causation.

The development of symbolic thinking represented another enormous leap forward separating human beings from the rest of the animal kingdom and opening up unimagined vistas for the development of civilization. This upward move to thinking and communicating through symbols gave rise to the imagery of language, art, letters and numbers. When humans became capable of understanding symbols, they developed vocal symbols that represented objects and actions. Combinations of these vocal symbols led to the creation of the first spoken symbols. The widespread acceptance of particular sounds to represent particular meanings led to the evolution of early spoken languages. At its heights of expressiveness, it led to the great symbolic poetry of the Vedas and other ancient scriptures seeking to reflect the reality of subtle spiritual truths of existence.

The rendering of objects and ideas into symbolic images was the first step in the gradual development of written language. These images sought to represent life impressionistically, through art. In the cave paintings, early humans were not simply decorating their homes, they were communicating, telling their stories, and passing on knowledge. Hieroglyphics, alphabets and numbers followed some 30,000 years later. This development of symbolic thinking resulted in the emergence of all forms of written literature. Today, we have a great variety of vocal and written symbols and infinite combinations of these symbols, and in the virtual world of internet and communication technology, we continue to create new symbols at an accelerating pace.

In ancient India and other parts of Asia, symbolic thinking and imagination eventually gave rise to the development of insight and intuitive thinking, to represent the perception of relationships and truths of existence in the form of aphorisms and analogies as embodied in the spiritual culture found in the Upanishads. Only centuries later did metaphysical forms of rational, linear thinking emerge that argued from facts to conclusions or thoughts to ideas.

The development of logical thinking was a major achievement of ancient Greece. The Greek civilization developed rules for logical reasoning to establish the inherent validity of any thought. Greek philosophy focussed on reason and inquiry. The ascent of mind to logic supported an efflorescence of philosophy, arts and science. Socrates, Plato, Aristotle and hundreds of other thinkers and philosophers flourished in the atmosphere that stimulated intellectual thought and produced treatises on philosophy and works of poetry and prose. The Greek philosophers have made a deep impression on humanity, their influence can be traced through medieval philosophy, Islamic thought, European Renaissance, Enlightenment, even upto modern day science.

The capacity for organization is one of the most prominent characteristics of the thinking mind. The evolution of civilization progressed by a gradual organization of objects, sounds, words, activities, people, groups, information, knowledge, thoughts, ideas and beliefs,

giving rise to the military, governance, production, trade, religion, education, etc. The enormous contribution of mind's capacity for organization to the advance of civilization is illustrated by the application of mind to organize the entire life of all society in the ancient Roman Empire. From the hunter-gatherer onwards, everyone knew that together they could do more and better than when alone. Hunting was more effective when done in groups. Living in a community gave physical protection and social security to the individual. Individuals and groups of people complemented each other, and accomplished far greater than before. It was in Rome, however, that the power of organization was clearly understood, perfected, and applied to every aspect of life.

“All through the history of the world, an ascent of mind was the catalyst for a corresponding advance of civilization.”

The Romans harnessed the power of the mind's capacity to compare and contrast things, categorize them and arrange them on an infinite number of different criteria. They organized governance, warfare, trade, law, and every aspect of society according to mental rules and principles, rights and duties. This period saw significant advancements made in all fields of life, the calendar, the postal system, aqueducts, apartment complexes and indoor plumbing, which were either developed or improved upon in Rome, and as the saying goes, all roads led to it. It was to a large extent due to its organizational skills that the Roman Empire was, at its heights, the most extensive social and political structure in the western world.

All through the history of the world, an ascent of mind was the catalyst for a corresponding advance of civilization. When religious thinking underwent a revolution, the Reformation resulted. Mental individuality found expression in the Renaissance.

The age of discovery and scientific revolution was the result of the application of a particular form of rational thinking—analysis—to a study of physical nature. Analytic thinking seeks to discern reality by dividing it into smaller parts and regarding each part as a whole in itself. Analytic thinking is well adapted to focus on the objective physical dimensions of reality observable through the senses, which readily lend themselves for experimental verification. It harnesses the mind's capacity for exclusive one-pointed concentration to reveal the intricate details of nature down to the level of the infinitesimal. It led to the classification of physical elements, the plant and animal kingdoms, and countless other discoveries. When combined with the powers of abstract mathematical thinking, it led to the discovery of laws governing motion and thermodynamics, heredity, physiology, and many other remarkable achievements in the physical and biological sciences.

As one consequence, specialization of knowledge became increasingly prevalent and the number of fields of knowledge gradually multiplied from a handful to over a thousand separate, distinct, compartmentalized disciplines. Systems or holistic thinking evolved during the 20th century as a reaction to the resulting fragmentation of knowledge and the problems that arose from viewing complex reality in terms of independent elements and systems.

Another consequence of the exclusive reliance on analytic thinking has been the insistence on explaining all phenomena exclusively in material, mechanistic terms applicable to

physical systems and a rejection of subjective forms of knowledge based on self-experience so essential for an understanding of individuals and groups of human beings. This has led to the search for general principles and laws to explain all human phenomena, resulting in neglect of the unique characteristics of individuals, as if human beings were as similar and interchangeable as different classes of subatomic particles.

Today, greater access to knowledge enables technological innovation which is bringing us closer and closer, eliminating space and abridging time. As a species, we started 200,000 years ago, but the pace of our progress has been accelerating. The changes that took millennia and later centuries, can now be seen in mere decades and years. Every component of our lives is immeasurably more sophisticated and complex. We have made great strides in longevity and in all aspects of human welfare. Education is no longer the privilege of the aristocracy but a universal right. Human rights is a recognized ideal. We have discovered, invented, created and cured. We have explored ocean beds, sent back photos from outer space, split the atom, and decoded the DNA. We have cloned animals, created virtual worlds and fit them into cell phones, moved from printing images to printing objects, toppled dictators using social media, and now consider occupying Mars!

This accelerating progress has been possible because each period and each generation has built upon all the achievements of earlier periods. The global civilization we see emerging today is the result of contributions by many different cultures over many millennia—each from a unique perspective arising from the development of different faculties and subtle powers of mind. Each age developed and expressed different faculties. Modern civilization is a product of this totality and integration of diverse evolutionary advances. The momentous achievements of modern science are the result of the cumulative development of wide ranging powers of mind and their application for the development of many facets of civilization. Each civilization and century added a tier to the base and climbed up, which is why we tower over everyone before us.

Paradoxically, at the same time we also see that each age has tended to focus on the development of some faculties to the exclusion or rejection of others. Ancient India on the application of intuition to discern spiritual truths of existence, Greece on the application of logical thinking in philosophy, the Middle Ages on ethical thinking in religion, the modern period on scientific rationality, mathematics and experimentation applied to the physical universe. Throughout the ages, religion, philosophy and science have each in turn succeeded in acquiring a dominant position of importance for a time, temporarily eclipsing the importance of the other two. There was a time when the church decided on the origin of man, the position of earth in the universe, and the cause of disease.

Today, the predominance of analytical thinking in science and other fields asserts with as much authority and tenacity. Early scientists such as Galileo, Copernicus and Descartes were powerfully constrained from proclaiming new knowledge by the all-powerful influence of prevailing religious teachings. Today the authority of positivistic, reductionistic analytic thinking plays a similar inhibiting role in the development of knowledge, especially in the social sciences, and on the further advance of civilization.

In spite of the tremendous progress we have collectively made, we find complex challenges that continue to defy solution by narrow, piecemeal, fragmentary forms of knowing. Poverty, unemployment, economic crisis, fundamentalism, violence, climate change, war, refugees, shortage of essentials constitute a formidable list. Each of these problems reflects the limitations and blindspots that have resulted from a partial, one-sided application of the diverse capacities of the human mind.

Exclusive preoccupation with analysis, mechanism, materialism, objective experience and general principles has suppressed essential insights into the role of intuitive thinking, subjective experience and the unique role of individuality in the advance of civilization. All the capacities that we need to accomplish are already there, we only need to accord appropriate respect to all the faculties developed by civilization in the past. We have created all of our problems, and we can solve them too, but only if we move to a new paradigm of thought and action. This was one of the core messages of the WAAS-WUC course '*Mind, Thinking and Creativity*' conducted on April 12-15, 2016, at Inter-University Centre, Dubrovnik, Croatia. We need to recognize the legitimacy of all the different faculties of knowing that we have developed so far, and also recognize that we are capable of developing new faculties.

Moving to a new paradigm of thinking demands creativity, individuality and original thinking. The analytic thinking that we practise today has no doubt led to great discoveries in modern science. But for all the phenomenal progress, our challenges too seem to be growing immensely, and they are unlikely to be solved by the faculty of analysis alone. We have a lot of specialists today, but not many generalists. So we are unable to find holistic solutions to problems. Our academic institutions have divided and subdivided disciplines, and our research labs have delved deep into each compartment. What we need to do is move out of compartmentalized knowledge and transcend the limits of our narrow approach.

One way to overcome the limitations of analytic thinking is to foster the use of symbols, analogies and metaphors in education and knowledge formulation. These are not just literary genres and devices to enhance the aesthetics of writing. They are tools that can foster deep thinking and deep learning. The symbolism of a poem can paint in a few lines a picture so beautiful that pages of prose cannot imitate. The description of the Symbol Dawn quoted at the beginning of this article, for example, describes a movement that begins with an idea, a dissatisfaction, an insistent and apparently aimless stirring that teases the unconsciousness to awaken. When it awakens, it does not awaken to knowledge, but rather to a first awareness or perception of knowledge which is described as a type of ignorance. This metaphor can be applied to understand the umpteen movements and revolutions we have seen in history. The Boston Tea Party, for example, was the outcome of such a dissatisfaction. There was no intention of starting the American Revolution. Freedom was not on the mind. The English king had levied tax on tea, and the Americans wished for something, but knew not what or how—as the poem says—this stirring of an insistent, dissatisfied, nameless idea resulted in the Boston Tea Party and the American Revolution. Similarly, the lady who began the Civil Rights movement that ended racial discrimination in the US, Rosa Parks, did not set out from home one day with the intention of ending segregation. She was travelling by bus, and was

asked to give up her seat and move to the back of the bus, to make room for white passengers. She refused to comply, she had obtained a seat, in the area reserved for black people, and was not inclined to bow to this demand. The simmering discontent among all black people and the aspiration for equality helped awaken the aspiration for freedom and equality. One fine day, one woman refused to give up her seat, and the Civil Rights movement was born, eventually leading to the unimaginable day when an African-American could become President of the USA. Similarly, the story of Mahatma Gandhi began with his being forced off a train while in South Africa. Any major movement—the abolition of slavery, women’s liberation, the end of colonialism or the Cold War, the Arab Spring and the overthrow of dictators—begins with a symbol dawn.

Poetry is a form of symbolism that can reveal and communicate profound insights and sublime ideas in a few words. There are many valid and important ways of knowing that transcend the limits of analysis, mathematical formulation, experimental data or rational argument. Symbolism is one of the higher ways of knowing. It is not often that poetry is associated with knowledge, information, science or data. But the symbolism of poetry is a powerful way to communicate. Symbolism enables us to think holistically and keep in mind the integrality of life.

The same is true of analogies. The three words ‘emperor’s new clothes’ is a powerful analogy applicable to a variety of people and situations. It communicates a universal human phenomenon of social conformity through a simple humorous incident. A complex, abstract idea can be communicated easily using a comparison with something that is already familiar. Take the idea that we often go by sense impressions and mistake the form for reality. In the course of our academic training, the study of abstract theories, models and formulas is given importance, whereby the underlying reality they seek to represent often gets obscured. Such forms are mere shadows of reality, such as the mathematical models used in String Theory, the simplistic theories applied to describe the global economy, or the psychological constructs applied to explicate human personality. Plato illustrates the fallacy of formal representation by his analogy of the cave. He describes men chained in a cave, facing the wall. All that they get to see are the shadows of objects that are behind them, on the wall they face. Not having ever seen the real objects, they live believing that the shadows are the reality. The analogy shows clearly the importance of the subjective experience over empirical evidence. Also, it makes clear how an analogy can be used to describe a situation, phenomenon or a complex idea succinctly.

Symbols, analogies, idioms, metaphors, similes, proverbs, sayings, parables and fables are types of figurative languages that can be used in our education and training to create imagery that breaks down the linear thought process and integrates multiple dimensions. Tradition tells us that there is a higher knowledge, which we call wisdom. The use of symbols, analogies, metaphors and imagery can assist in gaining and imparting wisdom.

The immense importance of the subjective dimension was another theme explored in the course on *Mind, Thinking and Creativity*. Positivistic thinking and analysis have suppressed the place of subjective knowledge even with regard to our understanding of conscious

individual behaviour in the social sciences. Subjectivity is often denied validity in scientific and academic thought. Even a cursory look at all great events and achievements in history shows the significance of the subjective experience.

“The strength of human aspiration and will is not a quantity that can be measured using any equipment or analyzed in a laboratory, and so it often fails to acquire authenticity and credibility as evidence.”

The knowledge of the significance of the subjective dimension of economy was a key to halting the banking crisis that spread ruin during the Great Depression in the 1930s in the US. The stock market crash in 1929 led eventually to the failure of 6000 US banks, and unemployment of a quarter of the country’s workforce. Stocks were down 75% from 1929. As each bank shut down, longer lines of people formed outside the banks that still survived. There was a wave of fear among the people desperate to withdraw their deposits while there was still a chance. That fear alone could have completely destroyed the American banking system, if nothing else did.

Franklin D Roosevelt became President at such a juncture. He was fully convinced that the country could tide over the crisis, and emerge successfully. He refused to continue the policies of President Hoover. He came up with bold reforms and regulations. But he found that the Economics he had learnt at Harvard and the counsel of his advisors was not adequate to address the crisis. He understood that the roots of the crisis were psychological and not financial. The problem was a loss of public trust. So he went on radio, and spoke to the people. He reminded them of their glorious past, and instilled in them faith in the government and confidence in their own capacities. He drove out the panic by famously saying that there is nothing to fear but fear itself. Restoration of people’s self-confidence stopped the banking crisis. His success illustrates the importance of subjective factors in the understanding of social phenomena. Physicians familiar with the placebo effect know the central role of the patients’ subjective understanding and attitude in curing any disease.

The importance of developing the capacity for independent thinking and creativity and individuality of action was a central theme in the course on *Mind, Thinking and Creativity*. Yet too often theoretical knowledge today based on general principles applicable to the social collective ignores the central catalytic role of the individual in social advancement. Individual accomplishment is a function of knowledge. But also and perhaps more importantly of will and determination. The strength of human aspiration and will is not a quantity that can be measured using any equipment or analyzed in a laboratory, and so it often fails to acquire authenticity and credibility as evidence. Yet they are essential determinants of human accomplishment in public life, business, science and academia. The social equation $Knowledge + Will = Reality$ is as valid as any equation in physics or chemistry.

A humorous and entertaining illustration of this equation is depicted in Jules Verne's famous novel *Around the World in 80 Days*. The hero Phileas Fogg accepts a wager that he can travel around the world in 80 days or less. Fogg is a peculiar man, strong, determined, calm under all circumstances, and most important of all, aware that it is his choice, not chance, that determines his capacity for achievement. When his friends caution him about the risk of storms, robbers, accidents and unexpected delays along the journey, he calmly replies that the unpredictable does not exist. The entire journey is fraught with risks, but Fogg, whose reputation, fortune and occasionally even life are at stake, acts as if his will—which happens to be very strong—determines the turn of events at every point in the story. While in India, he sees a princess about to be killed, and decides to save her. She is surrounded by a large crowd, and the palace guards are keeping watch over her. But sometime after even what is called the last minute, the impossible happens and she is saved from death. The story is full of such astounding feats. During the sea voyage from America to England, the ship's captain tells Fogg, in the middle of the Atlantic Ocean that they have run out of fuel. Fogg is not perturbed in the least, to find himself on a ship without fuel in the middle of the ocean. He orders all the timber and canvas on board to be used as fuel, and manages to reach home in the stipulated time, and win the wager.

“Just as the mind has developed this far, there is no reason to assume that it has reached the limits of development.”

Fogg's thorough knowledge of train and ship timings, routes, fuel and weather conditions accounts for only half the reason for this success. The other half was the will, the total conviction that a particular thing should and could be done. This is fiction, but history, biography and even the daily papers record more astounding feats than the most imaginative of fiction.

Winston Churchill said in the face of a strong Nazi attack during WWII, that *we shall never surrender*. He declared this, when his country's air force was outnumbered and technically inferior compared to the foe. England was expected to surrender in 6 weeks. It had a frontline strength of 1660 aircraft as opposed to 4000 on the German side. Germany trained 800 pilots a month, and Britain, 200. Had Churchill gone by these objective facts, he could not have declared his intention to fight in the beaches, hills, landing grounds and fields, with growing strength and growing confidence, if necessary alone, to go on to the end, whatever the cost may be. Every phrase, every word of his was saturated with his strong will, with which he inspired and energized his soldiers and civilians. He said he had nothing to offer but blood, toil, tears and sweat. Every one of his country men and women repeated it silently. This inspirational leadership played an important role in the Battle of Britain, and ensured an incredible victory to the underequipped and undermanned side.

Knowledge is only half the requirement. It is will, along with knowledge, that adds depth to learning. When it comes to life, when it comes to human affairs, there is no such thing as objective knowledge. The possibility of an event occurring, the success of a task, and the extent of the success are not independent of our understanding, commitment and will.

A concluding theme in the WAAS course was that, our study and understanding of the mind are still at a nascent stage. We have great accomplishments to our collective credit, and every one of them is a testimony to the ascent of our mind, starting from the time we struck two stones together to create a spark. But just as the mind has developed this far, there is no reason to assume that it has reached the limits of development. Today the major emphasis is placed on developing mind's analytic and computational capabilities and extending our mental powers through Artificial Intelligence and trans-humanistic visions. But that touches only the mechanical dimension of the human mind and leaves most of its rich endowments untouched.

In order to address the challenges and opportunities of the 21st century, humanity must have the imagination and creativity to think beyond the physicality of analysis and computation to embrace and develop the full spectrum of mind's capacities. The role of insight, decision-making, intuition, imagination and creativity in scientific discovery and spiritual experience testifies from different ends of the spectrum that higher powers do exist. The challenge before us is to discover how to systematically and widely develop them to evolve a global culture that is truly synthetic, organic and holistic based on knowledge that is truly integral.

The WAAS-WUC course on *Mind, Thinking and Creativity* cannot be seen only as a successfully completed four day lecture series. It is the beginning of a new paradigm in thinking, one that sees the complementarity in contradictions and the interdependence in disparate elements, that seeks to harmonize and integrate, and find comprehensive solutions to the major challenges of today. It can also be seen as a symbol dawn that takes humanity from the mental to a supramental level.

Author Contact Information

Email: harish.janani@gmail.com