

# THE INVISIBLE SHADES OF DISORDER

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## Abstract

*Design, in contemporary times, arose in the West as a humanizing response to the rapid industrialization. In its initial movements it appeared as the Art Nouveau<sup>1</sup> movement and at Bauhaus<sup>2</sup> and later at the Ulm school in Germany; a few decades later it appeared as the spirit of innovation and entrepreneurship that characterized mid-nineteenth century America. These approaches were key influences in the formative years of design education and practice in modern India<sup>3</sup>.*

*Unlike modernism that was characterized by a search for universal truths<sup>4</sup>, the post-modern critique<sup>5</sup> suggested that globalization led to a pluralistic global society that was without a dominant center of political power, or intellectual capital; the postmodern view was inclined to subjective knowledge as the dominant form of discourse. Thus notions of design that had characterized the modernist era with its emphasis on objectivity and universally applicable ideas of aesthetics underwent changes that sought to reflect the 'local in the global.'*

*Globalization is a relatively new phenomenon the implications of which are yet to be understood. Just as the critique of colonialism and modernity problematized the power-relations inherent in its mapping of the 'other', a critique of globalization is likely to throw up its own set of questions<sup>6</sup>.*

*Has design become a self-serving discipline that is deeply subservient to the belief that technology is the only key to some of the crisis<sup>7</sup> that face us today? This paper outlines some of the invisible shades of disorder that face us today and introduces integral approaches<sup>8</sup> that seek to understand the human condition at the beginning of the twenty-first century.*

## Introduction: Interpreting 'Design'

'Design' is used to suggest very diverse pursuits, and before getting into the main body of the paper, it would be useful to outline what it implies in this case. The word 'design' suggests intent and awareness; thus a gardener shaping a bush in a garden to make a 'bush-sculpture' is designing; an artist who is contemplating the delineation of space on a canvas is designing; a scientific researcher planning a new integrated circuit-board is designing; a cook, carving a pineapple for a salad is designing; an automobile designer working with industrial clay for a new model is designing. Of all these examples, it is the last one that is closest to the sense of the word 'design' as used in this paper.

To spell out the interpretation, the word 'design' refers not just to a professional activity – for that would apply equally well to the gardener, the artist, the scientist or the cook – it also suggests exclusivity. That is to say, the usage of the words 'design' and 'designers', often (implicitly) suggests an exclusive activity that is unique and different from all other professions. Thus one may observe that while there are many who may claim to be designers, it is actually 'designers' who design<sup>9</sup>!

The strength of the design approach, lay in its avowed intention to be a holistic discipline – a characteristic that was evident at the Bauhaus that sought to bring together craft persons and artists in an attempt to develop broad-based responses to societal needs; and it was true for design as a reformative movement in its early years when other specialized disciplines (in particular science and technology) were being pursued as water-tight compartments – very often distanced from the social milieu in which they worked. In such a scenario, the spirit of integration came as a breath of fresh air.

With the passage of time, when the initial euphoria of suggesting a 'design-synthesis' had diminished, the spirit within design seemed to ossify, and the discipline of design began to transform into a profession and a specialized field of study, called design with capital letters and manifested as designer labels and designer brands.

And like any other field of study, design too started developing its inner logic and subdividing into 'specialized design studies' – and thus one got to hear of product designers, and then fashion designers, graphic designers, typographers, communication designers, graphic user-interface designers, web designers, user-experience designers, human-computer interface designers, animation designers, automobile designers, and even emotional designers! The vitality that was very much apparent in the reaction to the facelessness of industrialization began to lose some of its youthful vigour, as it became a mainstream occupation in its own right<sup>10</sup>.

## The Global Faces of Design

If one seeks to understand the nature of design activity in the world today, one would visualize it a little differently depending on where one came from – geographically, economically, politically and indeed philosophically.

Varying interpretations on account of geography, would perhaps be notions of 'design as cutting-edge ideas, materials and technologies' in America; of 'design as a tool for empowerment' in Bangladesh; of design as 'craft-interventions' in India and China and of 'design as a economic tool' in Korea. Clearly the situations we encounter today are indeed complex and one needs to proceed with utmost sensitivity; for any obvious stereotyping<sup>11</sup>, might take away from the understanding that is being attempted.

Viewed with the cold logic of the marketplace, India (and Asia) does appear as a place for cheap skilled labour (and some of the skill is in the intellectual domain of software). This is what has largely led to the inflow of investment from multi-nationals and shaped the new design

curriculums in design schools in India. To a certain degree, the growth of the Indian middle class and its increasing power to purchase has also resulted in a spurt of design activity and design schools. However, the emerging situation is not without its inner tensions and conflicts.

For instance, the open work culture in multi-nationals is often far more attractive to the labour-force than the feudal-mindset that still characterizes some of the national organizations. The entry of primarily capitalistic forces has reshaped the Indian mentality to labour and addressed inequities in the highly regimented societal structure. It has altered the earlier conservative attitude prevalent amongst the middle classes to risk-taking, entrepreneurship and wealth creation. It has to an extent weathered the criticism that profit-making institutions such as multi-nationals cannot be philanthropic.

Indeed many of the multi-nationals have human resource development very high on their agendas with policies that spell out various aspects of work ethics with a transparency that was seldom encountered before. Yet it cannot be denied that without making huge profits, they cannot possibly afford to pay the kind of remunerations they offer to the 'cheaply-available' labour force; and one of the principles latent in multi-nationalism the flow of capital to places where labour is 'relatively-cheap'. Not everything that one witnesses in the age of globalization is praiseworthy.

In a sense, these paradoxes are not peculiar to our age and time. What was earlier the cold war between the communists and the capitalists, is now the mutual disregard between nationalistic and multi-nationalistic sentiments; though at times one does get the impression that some invisible juggernaut is in the process of bulldozing all dissent and flattening alternate voices that question the march of globalism<sup>12</sup>.

A global picture of the world at this point presents (as always) a multi-layered view of people and cultures that have aspects that are indicative of new transformations in languages, habits and lifestyles. One may observe that never before has the world been one community as it is today, and yet such an observation does gloss over the increasing divergences and rigidities that have also crept into world-views. It might seem that the ease of travel and the spread of tourism would help people understand one another better; yet it is also true that the highly polarized stances with constructs such as "axis of evil" are reminiscent of the excesses of an earlier era that victimized certain groups of people on the basis of their ethnicity. The polarization is not just between America and the Islamic world – one observes incidents of 'ethnic cleansing' all over – in Europe, as well as in India – thereby suggesting that the 'transformations' brought about by the global age may at best be superficial movements, bereft of true understanding and genuine compassion. The words of the eminent historian of our times, Arnold Toynbee are noteworthy<sup>13</sup>.

The critique of globalization is likely to include questions about the nature of progress and development; about the nature of technology and design; and at its root, the nature of the mindset that drives and shapes these. The disorder<sup>14</sup> and the dualities that one witnesses, leads one to regard the nature of power itself, as the subject of a critique<sup>15</sup>. One must necessarily lean to a more philosophical attempt at understanding the relationship between disorder and design.

## **Order and Disorder**

Order emerges from disorder and in turn is swallowed by a new order. Cyclical and evolutionary theorists shall continue to debate much in the manner of Candide and Pangloss in Voltaire's satirical take on the Enlightenment<sup>16</sup> in seventeenth century Europe. The metaphor of the universe as a set of eggs continually turning inside-out without breaking<sup>17</sup>, suggests a sense of some invisible order underlying the visible chaos of the cosmos in its minute and magnificent manifestations. Perhaps each age creates its own order that includes the order that was perceived by an earlier age – though it is likely that an earlier age also contains within it the potential of all its future fulfillment. In the contemporary age, that we tend to associate order with reason and rationality; and disorder with all that was irrational. However, it has been acknowledged that some of what appears as 'irrational' to the logical eye, when viewed from an alternate frame of reference, may contain truths belonging to realms that surpass reason<sup>18</sup>.

The Buddhist notion of compassion (which is also a tenet of the other religions as well) may be regarded as one such realm. For instance, the difficulty of the rational age to come to terms with the issue of capital punishment<sup>19</sup>, is negotiated in an entirely different manner when one is willing to include compassion as the basis for the organization of life. The technique of encoding subtle world-views into stories, suggests that the seeds of higher realizations are already present in the efforts of saints who lived several centuries before. An attempt at understanding some of these ideas by contemporary mystics and philosophers will open up doors of perception invisible to the linear order of the rational age. Thus what appears disordered deserves scrutiny, lest one miss the invisible order embodied in it.

## **Order: The Age of Reason**

The birth of science shook the foundations of religion. The 'godlessness'<sup>20</sup> that characterizes many contemporary societies, was prophesied by Nietzsche's proclamation that 'God is Dead!' While one may see a negation of this in Einstein's remark that 'God does not play dice with the universe' one may also interpret it as a new improved version of 'God' as 'design' that governed the intricate clockwork and intimately interwoven strands of time and space; and of matter and spirit. One may also conclude that though science undermined the stranglehold of organized religion (which was more about power than about religion) it perhaps did not exclude the religious experience.

However, in its popular manifestation it substituted the pursuit of art and religion by becoming the new miraculous<sup>21</sup> discipline. Being increasingly skeptical of the mysterious in the obfuscating sense, the rational mind was keen to demystify. The intellectual creativity that flourished effectively challenged many of the old dogmas and false beliefs. The unfolding of 'Design' is inextricably linked to the march of science. It is this that explains its position of power in the hierarchy of the new world that was shaped by the systematic application of sound scientific principles<sup>22</sup>.

Reason, became the principle that came to be deployed to organize human life. In the political arena it shaped the birth of democracies. Difference and doubt were integral to rationality. Unlike the earlier era that suppressed dissent with an iron hand, the age of reason sought to resolve it through civilized debate. In the social sphere, the power of reason was used to reform oppressive hierarchies. In an individual's life, it led to a responsibility for one's own life and this in turn led to a new found respect for the self-made person. This brought with it new notions of intellectual property and laws were made to protect the rights of the individual. The realization that equality was a condition that should include women and children brought about newer legislations<sup>23</sup>.

Reason can bring about understanding and empathy, but it is Reason that causes us to rise in revolt and righteous anger. Whenever there is a conflict, the opponents firmly believe that each of them is right and have an elaborate set of rational arguments to justify their stances. One may regard the Age of Reason as advancement over an earlier age of superstition and blind beliefs; it is by no means the culmination of the evolutionary process.

If it was the age of reason that unlocked the energies within the atomic nuclei to fuel and power cities it was the limitations of reasoned arguments that justified the necessity of unleashing the same energies<sup>24</sup>, with devastating effects to teach unforgettable lessons to those who were like us and yet unlike us. The human self, despite the magnificent strides that allowed it to soar in rockets and planes that flew despite being heavier than air, was weighed down by a dark side that prevented it from seeing the 'Other' as an intimately connected part of the same self. Thought and reasoned arguments had become the barrier that prevented us from feeling the pain of another. Clearly, Reason had its limits.

### **Disorder: The Limits of Reason**

David Bohm, who was a Professor of Theoretical Physics at Birkbeck College, University of London in a series of conversations with Jiddu Krishnamurti discusses thought and the limits of thinking. It is relevant to examine some of his notes from his work 'A Brief Introduction to the Work of Krishnamurti.'

'... we went on to consider the general disorder and confusion that pervades the consciousness of mankind. It is here that I encountered what I feel to be Krishnamurti's major discovery. What he was seriously proposing is that all this disorder, which is the root cause of such widespread sorrow and misery, and which prevents human beings from properly working together, has its root in the fact that we are ignorant of the general nature of our own processes of thought. Or to put it differently it may be said that we do not see what is actually happening, when we are engaged in the activity of thinking<sup>25</sup>.'

Thus one may conceive of chaos and disorder as opposed to order; chance and serendipity as opposed to design; pleasure as opposed to pain; life as opposed to death but all of these constructs remain restricted as binary oppositions.

The surrealist movement in Europe, sought to delve into the realms of the layers of human consciousness, not available to its conscious workings. Guillaume Apollinaire<sup>26</sup> in the early nineteenth century, called himself and those like him 'pilgrims of perdition' because they were risking what intellectual security they had as artists to explore the uncertain and the unproven.

Anna Balakian, in her work, 'Surrealism: The Road to the Absolute', observes:

'While literature had been neglecting imagination, science had learnt to make maximum use of it. It had cast aside the known patterns of matter and through ingenuity had created new ones. Science's contribution in Apollinaire's opinion, was its ability to give reality a relative meaning and thus liberate it from an assumed synonymy with the natural. The unnatural could become a reality, as twentieth century objects, which had no connection with nature, were proving more conclusively every day. The factory worker was all the time creating reality.'

(Balakian 1970)

Their views are echoed a century later in the following view:

'If worldviews have evolved from archaic to magic to mythic to rational and existential...who is to say that there aren't higher worldviews down the road?'

(Wilber, 2000)

### **Integral Approaches**

Wilber goes on to revisit various themes suggested by Schelling, Hegel, and Aurobindo.

...we can look at the higher stages of the evolutionary unfolding, according to the world's greatest wisdom traditions - the higher or deeper stages where the Spirit becomes conscious of itself, awakens to itself, begins to recognize its own true nature.

These higher stages are often pictured as mystical or "far-out", but for the most part are very concrete, very palpable, very real stages of higher development - stages available to you and me, stages that are our own deep potentials.

(Wilber, 2000)

The duality that stems from objectifying experience leads us to view essences as oppositions<sup>27</sup>. The relationship between individuals and societies has often been characterized by stress. We derive much from a sense of community and we are also driven to seek fulfillment as individuals and these two movements often pull at us from opposite ends.

In a lighter vein, Lewis Thomas<sup>28</sup> in a fascinating essay observes that 'ants are so much like human beings as to be an embarrassment. They farm fungi, raise aphids as livestock, launch armies into wars, use chemical sprays to alarm and confuse enemies, capture slaves. The families of weaver ants engage in child labor, holding their larvae like shuttles to spin out the thread that sews the leaves together for their fungus gardens. They exchange information ceaselessly. They do everything but watch television.'

Sri Aurobindo, a poet, mystic and seer of the twentieth century, presents a detailed analysis of human life<sup>29</sup> in his work, 'The Human Cycle' and suggests that we shall witness a decline of reason as the basis of life. Human life, he suggests will begin to be governed by forces that are 'supra-rational'<sup>30</sup>. He outlines the conditions for the coming of the spiritual age, and observes that it is only when the ego is abandoned do we get a chance of achieving spirituality in his inner and outer life. The freedom from the egoistic standpoint is the first and the most prominent characteristic of such a society.

'A spiritualized society would treat in its sociology the individual, from the saint to the criminal, not as units of social problem to be passed through some skillfully devised machinery but as souls suffering and entangled in a net and to be rescued, souls growing and to be encouraged to grow, souls grown and from whom help and power can be drawn by the lesser spirits who are not yet adult. The aim of its economics would be not to create a huge engine of production, whether of the competitive or the co-operative kind, but to give to men - not only to some but to all men each in his highest possible measure - the joy of work according to their own nature and free leisure to grow inwardly, as well as a simply rich and beautiful life for all.'

Interestingly one may observe in the chapter 'The United States of Europe'<sup>31</sup> of Sri Aurobindo's 'The Human Cycle', a parallel with events that led to the formation of the European Union.

## Conclusion

The transition to post-industrial societies that had ascended the hierarchy of needs from better designed products to personalized goods and services, was accompanied by a similar transition in design activity. Design evolved from its earlier engagement with the tangible world, to engaging with the world of intangibles and experiences. The earlier concerns did not disappear altogether - for the need for well designed products never really ceased; but these concerns now sought a deeper understanding of human needs. If the earlier approach was determined largely by material aspects - of manufacturing and production, design in the post-modern age had to engage with the cultural dimension. Thus, while the earlier designer needed to create a shoe that was comfortable, ergonomically designed and catered to some 'universal aesthetics' for shoes, the post-modern designer working for a multi-national shoe manufacturer, had to include an understanding of the cultural aspects in product semantics. If the modernist had great faith in the universality of "good design", the post-modernist understood that the global age had to temper itself with an understanding of cultural diversity. Thus a designer no longer regarded design as a set of objective parameters that had to be optimized, but an effort that had to take into account the experience of various users and ensure that it had meaning.

This paper suggests that even a paradigmatic shift from the material to the cultural would fall short when it comes to understand the deeper basis of some of the crucial problems that shall confront future societies. The designed response would necessarily have to go beyond the cultural dimension and engage with the self in a far more introspective manner. In this regard designers may learn from approaches that engage more directly with the human spirit and the human psyche.

Programmed as we are, to validate and to justify our own positions, we often regard the negation of the other as a corollary of our own beliefs. To transcend such dualism and examine what appear to us as chaotic and disordered, would bring us closer to what is. However, given our morality and ethics; our sense of right and wrong, good and evil - to transform ourselves to regarding the universe and all it contains as one essential continuum, is not only immensely difficult, but might even appear undesirable.

The Buddha began his inquiry into the nature of human suffering, over two thousand and six hundred years ago. He concluded was that the world came into existence because of desire. While existence, did yield its pleasures, it also yielded pain and suffering. The Buddha concluded that the cessation of desire, led to the cessation of existence; and to the salvation from the endless cycles of ignorant meanderings. Such an emergence out of ignorance, led to awareness, that was beyond dualities.

Finally the paper, attempts to introduce ways of seeing that suggest the limitations of rational thought. The invisible shades of disorder have a beauty that is beyond the beautiful; perhaps, these are shades that one can at best allude to, much in the manner of Wittgenstein's silences, or in the utterances of sages who dwell in the invisible shades of disorder<sup>32</sup>.

## Notes

1. Art Nouveau was not just a mere style; it was a way of thinking about modern society and new production methods. It attempted to redefine the meaning and nature of the work of art.
2. One of the main objectives of the Bauhaus was to unify art, craft, and technology.
3. The American Designer Charles Eames was invited by the Government of India to formulate an approach to design studies in India. The 'India Report' drafted by Eames led to the establishment of the National Institute of Design at Ahmedabad. The Industrial Design Centre at IIT Bombay, was modeled on the lines of the Ulm School in Germany. The IIT's were envisaged as premier institutions for scientific research and technology, by the Government of India, keen to usher in a spirit of modern-scientific inquiry.

4. 'Both "modernity" and "post-modernity" are used in a bewildering number of ways. But "modernity usually means the set of events that were set in motion with the Enlightenment, from Descartes to Locke to Kant, and the concomitant technological developments, which moved from feudal agrarian with a mythic worldview to industrialization and a rational worldview. And "postmodernity" usually means, in the broadest sense the whole sweep of post-Enlightenment developments, which also includes post-industrial developments.'  
Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p. 48.
5. 'The demand of postmodernity. The demand of an integral view. This does not mean that everything called "postmodern" is an attempt at this integration. Much of postmodern thought is extremist, nihilistic, narcissistic. But the more authentic currents of postmodernity, as I use the term-from Hegel to Heidegger to Habermans to Foucault to Taylor-are trying to get some balance back into the picture, largely trying to honor science and morals and aesthetics equally, and not simply reduce one to the other in an orgy of theoretical violence.'  
Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p.120.
6. Though the post-modern critique did question notions of 'intellectual property' and 'authorship' it is not yet clear whether cultural plurality is truly synergistic and not a new form of colonization that takes place in the virtual domain.
7. Jiddu Krishnamurti suggests that contemporary civilizations have made enormous strides in ensuring material prosperity, but psychologically remain at a primitive stage of development.
8. In particular we look at views in this regard by Sri Aurobindo and Ken Wilber.

Aurobindo Ghose was born on 15th August 1872, in Calcutta, India, and went to Cambridge for his education when he was just seven. Soon after returning he joined the movement for Indian independence. Though arrested in 1908, for the possession of weapons, he was acquitted and spent the last 40 years of his life working in Pondicherry for the goal of bringing about a new spiritual consciousness. He came to be known as Sri Aurobindo and termed his approach as "Integral Yoga"; unlike earlier Yogi's he held that yoga and spirituality need not involve retreating from the world.

Kenneth Wilber was born on 31<sup>st</sup> January, 1949, at Oklahoma City, USA. He Works outside the academic mainstream and is an American integral thinker who draws upon the disciplines of diverse disciplines: from science and systems theory to psychology, sociology, philosophy, postmodernism, and spirituality - to develop an 'integral theory of consciousness.

9. Though design began as an inter-disciplinary field, and still lays claim to this, one encounters the need amongst them to also claim to be an approach that is unique. While such posturing can be understood of a new discipline that seeking to connection other disciplines – and hence regard itself as interdisciplinary, to claim exclusivity undermines its strength. One cannot lay claims of ownership to the bridge one builds by connecting others.
10. Perhaps such a transformation is an inescapable outcome of a fresh innovation slowly becoming a tradition that can now afford to reflect on itself. This self-reflectivity that characterizes other fields that have slowly developed a history is also apparent in the new opportunities for 'design-research'. In its younger days, research was implicit to the act of design.
11. The Indian diaspora has actively sought to re-position India as a hub for design and change the perception that India is to be viewed as a source of 'cheap skilled labour'.
12. One may observe that it took a few centuries for the modernist spirit (that can be traced back to the Enlightenment in Europe) to find its full expression and another couple of centuries for a critique of modernism to appear. Indeed the logical conclusion to the application of rationality had its darker manifestation in the holocaust; and the birth of existentialism expressed eloquently by Sartre, Kafka, Camus symbolized the critique of modernity. A thorough critique of globalism might well take its own time to develop.
13. 'But why study history at all? ...Within the last five hundred years, the whole face of the globe, together with its air envelope, has been knit together physically by the amazing advance of technology, but mankind has not yet been united politically, and we are still strangers to each other in our local ways of life, which we have inherited from the times before the recent 'annihilation of distance'. This is a terribly dangerous situation. The two World Wars and the present worldwide anxiety, frustration, tension and violence tell the tale. Mankind is surely going to destroy itself unless it succeeds in growing together into something like a single family. For this, we must become familiar with each other's history, since Man does not live just in the immediate present. We live in a mental time-stream, remembering the past and looking forward – with hope or with fear – to an oncoming future.'  
Toynbee Arnold, *A Study Of History*, Singapore, OUP, Thames and Hudson, 1972, (see Foreword to the abridged edition).
14. 'On one hand we face a political and economic crisis and on the other, a demographic and ecological crisis.'  
Huxley Aldous, *Essays of Aldous Huxley*, India, Macmillan, 1973, p.77.
15. 'A small rapacious class feeds unsatiated on the misery of millions.'  
S. Shankar, *The Enemy Within*, 1996.
16. 'Enlightenment in general served many useful and extraordinary purposes. We might mention, the rise of democracy; the banishing of slavery; the emergence of liberal feminism; the widespread emergence of empirical sciences, including the systems sciences and the ecological sciences; an increase in average life-span of almost three decades; the introduction of relativity and perspectivism in art and

moral and science; the move from ethnocentric to world centric morality; and in general the undoing of dominator social hierarchies in numerous ways.

Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p. 63.

17. A metaphor suggested by poet and storyteller, W.B.Yeats.
18. It (evolution) is always struggling to establish new limits, and then struggling just as hard to break them, to transcend them, to move beyond them into more encompassing and integrative and holistic modes. And where the traditional sex roles of male and female were once perfectly necessary and appropriate, they are today becoming increasingly narrow, outmoded and cramped. And so both men and women are struggling for ways to transcend their old roles, without - and this is the tricky part - without simply erasing them. Evolution always transcends and includes, incorporates and goes beyond.  
Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p. 5.
19. Arthur Koestler records the self-contradictory dilemma of the rationality in the following paradox:  
'The murderer has killed. It is wrong to kill. Therefore, let us kill the murderer.'
20. '...most of the world's great wisdom traditions are, in various ways, against modernity. Modernity is viewed as the great antireligious movement, the great movement of rational secularization, which "killed" God....Killed the mythic God, yes. But Spirit is in the overall process, not in any favored epoch or period or time or place. Reason has more depth than mythology, and thus actually represents a further unfolding of Spirit's own potentials. The rational denial of God contains more spirit than the mythic affirmation of God, simply because it contains more depth. The very movement of modernity is a collective increase in the Spirit's freedom, evidenced amongst other things in the great liberation movements that define the very core of modernity.'  
Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p. 293.
21. It seems truly miraculous that a whisper into a cell-phone travels almost instantaneously half-way round the globe - from a conference room in Turkey, walled and air-conditioned, to a tiny hamlet in India!
22. 'Art, after a short-lived alliance with positivism, had soon protested, revolted, taken refuge in the dream, unsuspecting that soon science was to claim the dream itself as one of its legitimate domains of investigation. Science seemed to be the destroyer of the marvelous and the mysterious. The resentment was not untouched by a certain amount of jealousy on part of the artist in regards to the strides made by the scientific inventor.'  
Balakian Anna, *Surrealism: The Road to the Absolute*, London, George Allen and Ulwin Ltd, 1970, p. 81.
23. 'Because of social relations that began to organize themselves around the basic forces of production - in this case the plow - men began to dominate the public sphere of government, education, religion, politics. And women dominated the private sphere of family, hearth, home. This division is often referred to as male production and female reproduction.'  
Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p. 47.
24. The representation paradigm was dualistic in this sense: the subject doing the mapping was not really a part of the world that was being mapped. The alien mapmaker simply stood back from the pre-given world and mapped it, as if the two entities had virtually nothing in common.

Most "new paradigm" approaches fall into this dualistic trap, because it is a very very subtle trap. Most new paradigm approaches simply think that getting a more accurate map will solve the problem. If we had a nice holistic and systems map, instead of a nasty atomistic and mechanistic map, that would heal the dualism.

...The nondualistic approach doesn't deny the representational paradigm altogether; but it does say that at a much deeper level, thought itself cannot deviate from the currents of the Kosmos, because though itself is the product and performance of those very currents. And the task of philosophy, as it were, is not to correct their deviations from reality, but to elucidate these deeper currents from which thought could not deviate, even if it wanted to!

Wilber Ken, *A Brief History of Everything*, Dublin, Gateway, 2001, p. 59.

25. This is referenced from: [http://www.ratical.org/many\\_worlds/K/](http://www.ratical.org/many_worlds/K/)
26. 'Why not a parallel between the creativeness of applied science and the arts? In his preface to *Le Mamells de Tiresias* he created the word "surreal" to designate the human ability to create the unnatural, and he pointed out that man's first surrealist act was the creation of the wheel, which imitates the physical function of motion but creates a form entirely independent of the forms known to exist in nature.'  
Balakian Anna, *Surrealism: The Road to the Absolute*, London, George Allen and Ulwin Ltd, 1970, p. 81.
27. But at present the human intellect has been so much mechanized by physical Science that it is likely to attempt the revolution it is beginning to envisage principally or solely through mechanical means, through social and political adjustments. Now it is not by social or political devices, or at any rate not by these, chiefly or only, that the unity of the human race can be enduringly or fruitfully accomplished.}  
Sri Aurobindo, *The Human Cycle*, Pondicherry, SABDA, The Turn Towards Unity, p. 263.

28. Thomas Lewis. *The Lives of a Cell: Notes of a Biology Watcher*, 1974, Viking Press.
29. 'The essential features are the same in Russia and the Fascist countries...there is a seizure of life of the community by the dominant individual leader; there is a rapid crystallization of the social, economic, political life of the people into a new rigid organization effectively controlled at every point; there is the compulsory casting of thought, education, expression and action into a set iron mould, a fixed system of ideas and life motives, with a fierce and ruthless, often a sanguinary repression of all that denies and differs; there is a total unprecedented compression of the whole communal existence so as to compel a maximum efficiency and a complete unanimity of mind, speech, feeling, life.'  
Sri Aurobindo, *The Human Cycle*, Pondicherry, SABDA, The Curve of the Rational Age, p.193.
30. Modern Science, obsessed with the greatness of its physical discoveries and the idea of the sole existence of Matter, has long attempted to base upon physical data even its study of Soul and Mind.
- ... The French Revolution, it is thought, would have happened just as it did and when it did, by economic necessity, even if Rousseau and Voltaire had never written, and the eighteenth century philosophic movement in the world of thought had never worked out its bold and radical speculations.
- Recently however, the all-sufficiency of Matter to explain Mind and Soul has begun to be doubted and a movement of emancipation from the obsession of physical science has set in, although as yet it has not gone beyond a few awkward and rudimentary stumblings.  
Sri Aurobindo, *The Human Cycle*, Pondicherry, SABDA, The Cycle of Society, p.1.
31. A co-operative form of human society existed formerly in the shape of a commune; but the restoration of the commune as a unit would imply practically the return to the old city-state, and as this is not now possible with the larger groupings and the greater complexities of modern life, the socialist idea could only be realized through the rigorously organized national State.  
Sri Aurobindo, *The Human Cycle*, Pondicherry, SABDA, The United States of Europe, p. 325.
32. The notion of dancing with disorder, is symbolized in the Hindu view of the cosmos by the dancing Nataraja. Nataraja, who is also the Lord Shiva - the God of Destruction (of ignorance) has matted locks swaying as he dances the tandava - the cosmic dance of chaos; his face poised and calm. Encircled by a ring of fire that symbolizes the trials and tribulations of life, he dances with an equanimity suffused with a smile suggesting his victory over the powers of ignorance. One also encounters the image of Goddess Tara in a similar dance.
- A detailed study of this may be found in the work 'The Dance of Shiva' by the eminent art critic, Ananda Coomaraswamy.

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