

# Arupa the Implicate Order as Frame work for New Age Foundation in design Pedagogy

A G Rao

## Abstract

The article "Arupa the Implicate Order as a Framework for New Age Foundation in Design Pedagogy" explores a transformative approach to design education grounded in the philosophical concepts of the implicate order, originally proposed by David Bohm. The "Arupa" framework emphasizes multi-sensory learning, imagination, and the importance of both active and spiritual silence in fostering creativity and self-awareness. Inspired by the teachings of J. Krishnamurti, the framework encourages students and educators to engage in free thinking and dialogue, resetting their "inner order" to enable holistic learning. The author discusses practical strategies, such as guided imagery, theatre-based learning, and immersive material-based tasks, to cultivate deep reflection and creativity. Additionally, drawing on ideas from philosophy and cognitive science, the paper offers a roadmap for transforming design pedagogy to meet the demands of contemporary education while addressing challenges such as large class sizes and the increasing use of digital tools. The paper also brings out need for spreading the virtues of design to other disciplines for holistic transformation of Society.

## 1.0 Introduction

"Arupa" in design refers to the unmanifested form or underlying potential from which visible forms (rupa) emerge. It aligns with David Bohm's concept of the implicate order, where design is seen as a process of unfolding hidden structures into tangible forms. As a framework, Arupa the Implicate order' offers understanding of form and design as part of a larger, interconnected, and evolving process([arupa-implicateorder-one](#)) (1). Following this further, potentials of Sense perceptions for pedagogy and practice of design were explored in my subsequent papers (2,3,4,5) with a plea for their inclusion in Pedagogy of Foundation. The new frame work, taking inspiration from design thinkers like Donald Schon, Pallasma and Nigerly cross, and drawing from 50 years of my teaching experience at IDC, postulates a new radical approach with a potential to bring fundamental change in the learner in the very 'process of learning'. 'Free thinking and Dialogue', propounded by J. Krishnamurti and Dr.David Bohm becomes basis to shape new knowledge in Phenomenology, Cognitive Sciences and philosophy.

Demands of a rapidly changing world with new tools and technologies like AI, VR, 3D printing Etc., can become opportunities with a right direction in the new framework.

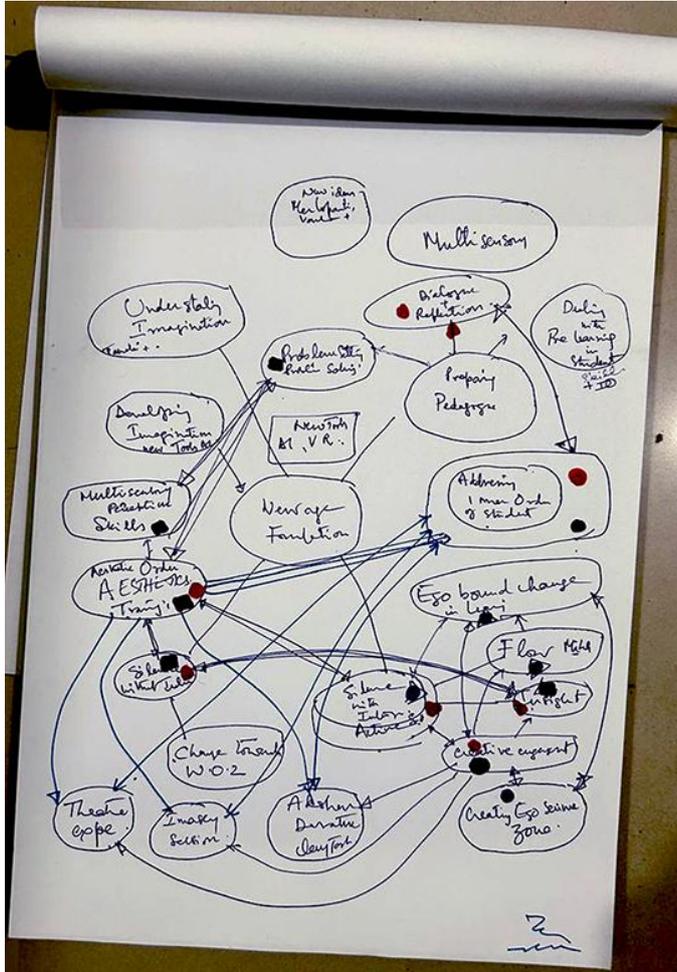
Design in Arupa framework also has a bigger role of taking virtues of Design to other fields for a holistic transformation of Society.

For shaping the frame work, there is a need to look at various connected topics to understand their enfolded orders, to bring new solutions. We may identify them as

- Understanding Imagination (2)
- Spiritual Silence and Active Silence (3)
- Preparing the Pedagogue (4)
- Educating New age student (5)
- Conducive eco-systems (5)
- New Ideas from scientific and philosophical studies (6)
- Multisensory Perception (7)

- Strategies from Innovative experiments (8)
- Adopting new digital Technologies-AI, VR... (9)
- Spreading across disciplines (10)

But the inter connections are indeed complex for a linear thinking narrative, as we can see in a mind map made for this article.



## 2.0 understanding Imagination

Developing Imagination in a design context has been the main objective of Foundation programmes. We can recognize two types of Imagination in this context: Abstract and Metaphoric.

### 2.1 Abstract/Original

Occurrence of 'imagery' from 'past experience' (memory) to the current situation/challenge 'Tawalai Wolf story' is an example to understand this type of imagination.



- . Tawalai Wolf story!

*In early seventies we conducted a workshop for children at 'Tawalai', initiated by my colleague prof. Kirti Trivedi(Kirti).Tawalai is a small village near Indore(MP, India). It had a residential school for Tribal Children. The school's, Head master, a Gandhian in the footsteps of his father, was elder brother of Kirti.*

*My self, Kirti Trivedi, M.S.G. Rajan and Sudeep Mistry (a M. Des student who was doing a special project on child education) went from Bombay.*

*We had little experience in conducting such workshops. We went with a sketchy plan and an open mind. We came to know that 'Drawing' was not taught (blessing in disguise) in the school. While talking to teachers we learnt that a wild wolf was prowling near the village a month back and had attacked few persons. It had caused a sensation among children as well. We came up with an idea of asking the children to draw the incident. What came out was a big surprise.*

*Pictures of Wolf:*



*Courtesy:prof.Kirti Trivedi*

*Children wrote down the story with sketches. The images of 'wolf' were wonderful as you can see on the cover page of "Abhikalpa", an IDC magazine, initiated and edited by Kirti Trivedi. No child had seen the wolf. A cow, crow or a rat which scared the children got transformed into a scary wolf in their hands. No line was erased or redrawn. We had asked local teachers to do the same exercise. They struggled to make pictures (after erasing several times) of wolf based on what they had seen in books. Drawings which they produced had no confidence in them and looked lifeless*

It seems, 'The encoded imagery of an animal or bird which had caused fear in each child was 'drawn out' from the memory and transformed it into an image of 'Wolf' they had not seen. It is interesting to observe the 'variety and originality' of each kid in imagining a different image of an animal or a bird.

*We may see it as a primary, abstract process in Imagination.*

## 2.2 Metaphoric Imagination

‘Seeing as’ or ‘Connecting two entities to create a new meaning’ is at the root of metaphoric imagination. Such connections can be ‘less or more’ surprising depending on the ‘categories’ they belong. Seeing a quill as pen may be less surprising compared to seeing heart as a pump. Creative Techniques/methods like Osborne’s Brain storming and ‘Synectics’ devised by WJJ Gordon (6) are useful for training of such imagination.

There is ample scope to invent or create new techniques/methods based on multi modal sense perceptions, games, etc., for Foundation programme.

Techniques like ‘Imagery sessions’ and Theatre session (3.2.1,3.2.2) can be used for triggering Generative metaphoric Imagination.

## 2.3 Representation of Imagination

Representation of Imagination in design can happen in many modes like sketching, singing, acting, using instruments (like ipads) or storytelling, etc., Conventionally sketching dominates. Skills of representation can limit the imagination. These are like ‘craft skills’ and ‘how one learns them’ would make a difference. ‘Expertise’ built in one skill, may lead to reluctance for experimentation with another ‘skill- mode of representation’. Creating specific task with a ‘defined new skill or tool’ can counter such inertia.

Coaching in ‘Multiple modes of representation with freedom of choice, would also benefit nurturing ‘Imagination’.

*In an under-graduate course of design at DJ Academy, when students were asked to present in ‘Theatric Mode’, they became more creative as they could work in small groups, using body language. (see 8.3, short task 1.2, below)*

## 3.0 Spiritual Silence and Active Silence

I am naming

- ‘Silence with no Intention’ as ‘**Spiritual Silence**’  
and
- ‘Silence with Intention’ as “**Active Silence**’

We will explore both of them in the context of ‘aesthetic Order’ and ‘design’.

### 3.1 ‘Spiritual Silence’

‘Spiritual Silence’ refers to the *silence and emptiness*’ mentioned by David Bohm and F. David Peat, in concluding part of their book, ‘Science, Order and Creativity’, below:

*‘particularly interesting and unusually thorough going example of this approach is from a modern thinker, Jiddu Krishnamurti. His writings go exclusively and deeply into the question of how, through awareness and attention to the overall movement of thought, the mind comes to a state of silence and emptiness, without any sense of division between the observer and observed. In this state, the mind’s perception is clear and undistorted. Krishnamurti feels that such a mind is necessary to dissolve the kind of problems that have been discussed throughout this book. (pages 257,258) (7)*

Similar state of Silence is mentioned in many religions. Qualities of Love, compassion, Inner joy and choice-less freedom are associated with such a state. Particular interest for us in the

Frame work of 'Arupa the un-manifested or implicate order' is to see such *Silence without intention as an aesthetic state of 'Experiencing beauty'*.

J Krishnamurti, a spiritual thinker in recent times, indicates such a state.

'It was a morning of great delight and great beauty. Tamarind, the palm tree and the mango seemed to fill the valley and every leaf was sparkling. Bougainvillea, the rose and the many thousand little flowers were exploding with colour. You could hardly take your eyes from them. Their welcoming beauty filled your eyes and you saw nothing and heard nothing but what they had to say. It was really a most marvelous morning of purity, of great silence and tranquility. You hardly dared to move, let alone talk to the great throng of people waiting.' (page 51) (8)

We might have all experienced such a state of 'Spiritual Silence', occasionally. Such 'insights' have the power to reset the Inner Order of both student and pedagogue at sub-conscious levels. It can certainly be a source of energy for 'Active Silence' to operate, with varying cultures, life styles, and contexts, belief systems, etc., to take Design into a strategic role for bringing change in Society.

### 3.2 Active Silence or 'Silence with Intention'

'Active Silence' is a kind of total involvement in action akin to 'flow', articulated by Mihaly Csikzentmihalyi, as a fully immersed 'creative process, often loosing track of time and external distraction. It is familiar to designers, artists, scientists and other professionals deeply committed to their goals. *Active Silence, where the mind is fully engaged in the act of perception without inner distractions can transform the experience of senses into a meditative state, fostering deeper tacit knowledge and creative breakthroughs.*" Concept of Active silence in the new frame work is seen as an aesthetic order, which can be inculcated as part of New Age Foundation in design. However, 'Means and methods' to inculcate 'Active Silence' 'is the challenge for Design Coach in the New Age Foundation. Some attempts in that direction are discussed taking 3 examples,

- Guided Imagery with body participation',
- Theatre Experience at IDC,
- A clay task 'Akshara Devata' or 'Letter Goddess' done at IDC.

'Active Silence' in operation can be seen in each of these events.

#### 3.2.1 Guided Imagery with body participation'

Imagery Sessions address a state of mind, body kept in a still state with full awareness. Voice of Narration guides imagination to trigger imagery at deeper level.

'Body Learning' is an essential feature of design pedagogy, though there has been no documented attempt to nurture it for developing imagination. I saw a new potential to explore Imagination with body in relaxed, attentive mode when I participated in an 'Imagery session' conducted at Creative Education Foundation, Buffalo, USA, in 1980. This led to introduction of Imagery sessions by me at IDC, to tap individual, unconscious imagery which could link to the intended problem to be solved. Deep relaxation, one experiences, has the potential to unfold the 'enfolding past memories' to transform 'Inner Order' of an individual

For the Imagery sessions at IDC, elaborate preparations used to be made in an auditorium with

- no entry for outsiders during the session
- dim light

- all noises cut off
- a relaxing music
- a conducive fragrance by burning incense sticks burnt in a safe mode and
- a mike for voice input at disposal.

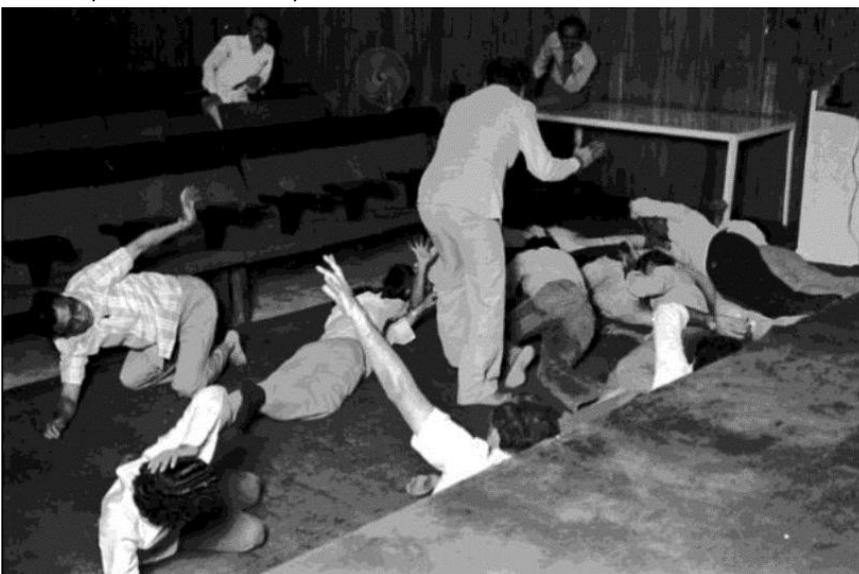
*Guided Imagery sessions induce participants to enter into a self-hypnotic mode responding to the voice of the conductor and soothing music. On the suggestion of the 'Voice', participants relax their bodies completely from head to toe and explore visual imagery! Suggestions like becoming a bird and flying, trigger positive feelings and invoke individual imagery!*

These sessions with a duration of 20 to 30 minutes leave deep impression on participants. I have conducted more than 30 such sessions for different groups over a period of 30 years and the response has been, always, positive. Many participants felt that, they had deeply relaxed for 'the first time' in their life. One executive attending such a session, surprisingly became free of long, enduring head ache he had all along. In general, each person responded with his/her own inner imagery. One of them connected suggested imagery to the specific problem, which was tackled earlier. For some dancing people transformed into geometric figures to see new compositions.

*The technique is similar to Yoga Nidra (an attentive sleep like state) in Indian tradition, which is practiced as a meditative state.*

### 3.2.2 Theatre Experience at IDC

In theatre experience, one comes out of bindings of 'self-image'. Body imagination in movement' takes shape with 'Tactile and Kinesthetic senses' in operation as 'Active Silence'. Again my participation in the week -long workshop organized by Creative Education Foundation, at Buffalo (USA) in 1980, became the seed. I found a right person for the task, Prof.Kamalakar Sontakke, well known in the field of 'Theatre' in India, with help of my mentor, Prof.S.Nadkarni, who headed IDC at that time.



Prof.Kamalakar Sontakke conducting a Theatre session at IDC with Girish Agarkar and A G Rao watching

First theatre session was conducted as part of 'Creativity and Problem Solving Workshop' Organized for 'engineers and executives' from Industry. (10). Later, after long dialogues, he agreed to conduct such sessions with specific content in Form expressions like 'security', 'friendliness', etc

The new experience of body participation or 'Active Silence' had two effects on students.

- Change in personality

Many students lost their 'Inhibitions'. Dramatic change in the 'Inner Order' of some students could be seen especially, when they saw a video of their participation, after the 'theatre session'. Observing one's own 'body-self' triggered a 'deep reflection' in many of them.

- New mode of Learning

Students (especially with engineering background) who had difficulty in catching up with the abstract visual language in 2D, 'were able to enact the same expression like 'security' bodily' rather easily. To express security by surrounding one student with bent hands. Later dialogue helped them to convert it to abstract visual language in 2D!

### 3.2.3 Active Silence in a clay task 'Akshara Devata' or 'Letter Goddess'

Active Silence as an immersive experience in making with materials like clay is familiar to traditional design pedagogy. Many factors contribute for such an 'Active Silence'.

- Looking at a task done in 1984, which I had framed as Akshar Devata:

At that time, student number was small. With me and Abdul Gaffoor as instructors, there was ample time for personal discussions. IDC's ceramic studio had a facility for all the 12 students to work at a time. There was free work culture to take tea breaks or listen to music of one's choice, ... Following is description of one student's work, which can be seen as 'Active Silence'

in Aesthetic Order

#### **Akshara Devata or Letter goddess in Clay**

A task set for Mdes students in 1984. Instructors: A.G.Rao and Abdul Gaffoor



Letter or alphabet 'Aa' in Kannada and Telugu, seen at the end above, was selected by a student. Problem setting, to translate a letter form which exists only in 2 dimensions, into a 3D shape provided the ground for Imagination.

For the student, working in clay for the first time, it was a discovery of property of material, how much water to add, prepare, etc., with the guidance of an instructor. Simple technique of rolling clay made coiling possible to create flat plate. The letter got a pedestal with the same coiled clay, on which the 3D letter rested. It was not difficult for the student, exposed to Hindu culture to imagine the new shape, with its 'Meaning'. Dialogue with the teacher helped in consolidating the output.

The total experience of undivided attention, including the feedback from colleagues and teacher could be termed as, 'Active Silence'. It became a meditative act with an intension. As I observed it was an immersive engagement. Students forgot routines like running to hostel for lunch in time! 😊

Photographing the 'clay model with required lighting', helped in encoding the body learning into a 'visual memory'.

#### 4.0 Preparing the Pedagogue

The New frame work with 'Active Silence' in operation is an ideal situation, for the student and the educator. But the School Managements are by and large not prepared for such a vital change. They tend to harbour 'technical skills and structured problem-solving', which are no more adequate in the current situation. The new focus on imagination shifts away from rigid frameworks, encouraging open-ended exploration, creative thinking and resetting Inner Order of student as a primary goal. This represents a move towards fostering innovation rather than replicating existing solutions. Educators with tradition of 'Bauhaus', Hfg Ulm taken further at NID and IDC, and in many other places understand the *new role* they need to play, often conflicting with School Management. New Role of Pedagogues demand adoption of

- 'Dialogue and Reflection' as a change agent to reset one's own Inner Order
- Dealing with different levels of pre-learning in students
- Problem- setting as Aesthetic skill

#### 4.1 'Dialogue and Reflection' as change agents

'Dialogue and Reflection' are main features in 'Active Silence'. Dialogue with open mind is a two-way interactive process which will transform the 'Inner Order' of the student as well as Teacher. Thus Role of Pedagogues acquires a significance and demands the resetting the 'Inner Order' of Pedagogues who are likely to be at different levels. (9)

- Educators in WO1  
Many experienced educators being in WO1, may be the biggest hurdle to adopt New Age Foundation. They would support authoritarian management and pursue authority themselves in subtle ways. New technologies are likely to be introduced in damaging directions with such Educators in the lead. College Campuses are likely to become 'forts' with guards in the name of discipline. Young students are likely to revolt or lose motivation to learn in depth.
- Educators in Working Order2 (WO2)  
Educators with experience in WO2, often face conflicts with the School Management's commercial objectives and the expectations of Parents. But they will be the leaders for any effective change. They need to initiate dialogues with in the 'Faculty group', offering the programme. Such discussions need to reach faculty groups in other schools as well. This will

be required as a strategic step. Experienced practicing designers in WO2 need to be brought into faculty positions or as consultants for an effective spread of New *Age Foundation in design*.

- Young Educators

We need to pay special attention to young educators entering the profession of 'Teaching' as a 'Job'. An aspiration in their 'Inner Order' needs to be nurtured for a better future, by the well-meaning progressive Managements.

#### 4.2 Dealing with different levels of pre-learning in students

In design programmes, it is not uncommon to have students from different backgrounds and with different levels of skill knowledge. Though students come through a selection process, less is known of their 'body learning'(skill) as current evaluation processes and methods are inadequate in that zone.

Thomas Fuch's statement gives us a clue for previous learning of an Individual:

*'each subjective experience and behaviour induces changes in the plastic neural memory structures, which in turn results in altered experience or action. In other words, there is a continuous interaction between experiential process and brain structure. Over time, experiences are sedimented in the form of organic habits, dispositions and interactive schemes that eventually constitute the individual's personality'*

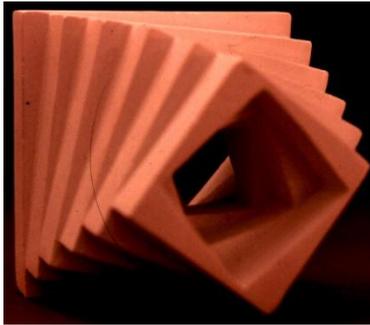
##### 4.2.1 Creating an Ego-secure zone for students

There is need to create a secure zone for a student to step out of earlier learning which has become a sedimented skill which acts unconsciously. It may get linked to emotional zone of I- psych. One may tend to exhibit or show their skill with a superiority complex. Such skill talent acquired earlier can hinder experimenting and learning of new technique or tool. *On the other hand, earlier body skill can act as an advantage to quickly catch up the new skill zone required. There is little knowledge based on research on this topic. One way to deal with the situation will be to observe overall creative behavior and performance of the student in general and have a personal dialogue!*

##### 4.2.2 Setting Open ended challenge

A difficult task of the teacher is to convince a student that he/she can continue to learn at higher level in a course which he/she has already done. Setting Open ended task along with personal dialogue can resolve the issue. We had an interesting situation when a NID diploma holder, Mohan Chandra, joined IDC- Mdes-programme in eighties. We exempted him from some basic courses like 'elements of design' dealing with 2D. But he was keen to take '3D-Form' course which I was teaching. One task which I had set was to express a theme 'Spirals in Cube!' in POP (Plaster of Paris) Mohan Chandra took the challenge and came with unique solution where positive and negative spaces of the cube were explored. His performance helped to increase the bench mark of output in the class.





Work of Student: Aloysius Gomes

#### 4.3 Problem- setting' as Aesthetic tool

Problem setting is a skill 'Designers' learn in Practice as Donald Schon brings out eloquently in his writings. (11) I first came to know the 'Importance of naming', in my personal discussions with Don (as we fondly addressed him on his insistence) when I was his student in 1980. As Schon points out 'Professionals frame and reframe the problems, setting the boundaries and context within which the problem is understood'.

Naming and framing a problem, being creative acts, demand 'Silence of Mind' in the creator. Such 'Active Silence' would need the reflective mind and entry into an 'Aesthetic zone'.

Like a 'Designer in action', design educator also needs to develop such tacit skill of 'Naming and framing' in the act of 'problem setting' in Pedagogy.

For a design educator 'Naming and Framing' also become essential tools to steer the dialogue with a student. It would lay the ground for Learning Design. When one sets a problem to students, one need to know at least one solution as one has to steer it in a certain time boundary. Student learns by doing it. But teacher learns when all students are able to do it within the constraint of time which he/she might have set.

#### 4.4 Abstracting from a specific solution

Abstracting from an available specific solution another strategic skill, useful for a pedagogue. In eighties, I adopted this strategy when I came across a beautiful way of bisecting a cube into two identical parts by a in a design magazine. I abstracted a problem from it for a Form course as *'Divide a cube into two identical parts. But it should give us an element of surprise when we open or separate the two parts'.*

After some struggle students came out with impressive solutions. Long 'individual dialogues' took place. The results gave a big boost to the 'Form course' and led to a series of cube exercises, with variations in problem setting for 4 batches. (which I plan to describe in detail in subsequent articles.)

#### 5.0 Addressing Inner Order of a Student

Foundation in design aims to reset the student's values, sensitivities, outlook towards life in a fundamental way. The personality gets shaped for life as a professional with ideal values.

Three types of knowledge needs be learnt by a student.

- Knowledge of self- "I-psychological" and "I-factual."
- Tacit knowledge related design
- Articulated knowledge of design.

#### 5.1 Knowledge of Self

Self or 'I', manifests as "I-psychological" (I-Psych) and "I-factual." ( I-fac)

I-Psych is shaped by cultural and social influences. From early life, individuals are given

identities through names, roles, and labels, which are often reinforced by society. I-psych becomes a fragmented self, which hinders creativity! Design students need to explore the question, “Who am I?” to break free from these psychological constraints and move toward a more liberated, holistic mind-set. This inner reflection helps them tap into their creative potential by letting go of biases and preconceived notions.

I-factual: I---fac focuses on understanding one’s societal role and responsibilities, often referred to as ‘Dharma’ in traditional contexts. For design students, this means recognizing their duty not just within the discipline of design but also in how their work impacts society. The concept of Dharma can guide them in creating designs that are ethical, socially responsible, and aligned with a greater purpose. Understanding this dimension of the self allows design students to create work that is meaningful and serves a broader function in society

For design students, self-knowledge is crucial as it helps them break habitual ways of thinking, reflect on deeper truths, and align their creative practices with both personal insight and societal responsibility (12).

#### 5.2 Tacit knowledge related design

Tacit knowledge is familiar to design field with its studio culture of doing and learning. With new inputs of multiple senses in to design pedagogy it needs to explore new possibilities as discussed in **7.0**

#### 5.3 Articulated knowledge of design

This takes a new turn with explosion in knowledge and entry of new digital tools like AI and VR, further discussed in **10.0**

#### 5.4 Conducive eco systems

Recent scientific studies have reinforced the importance of eco systems to Learn.

Educator plays key role in creating a conducive system in New Age Foundation

- Supportive surroundings  
Absence of ‘authoritarian’ attitude of the educator is essential for creating a conducive eco system. Open discussions with all students participating along with Teacher are essential. Planned trips to nearby natural abodes can become unique experiences.

*A student who has become a design activist working with tribal communities in Meghalaya (North East India), still remembers a ‘Synectics session we had near the Powai lake’, years back when he was a student at IDC. With the enthusiasm of students like him, we suddenly decided to have the class at the open boat house, overlooking the Powai lake in IITB Campus. we carried a black board as well. Watching silently the mesmerizing sun shine on water for long period was part of the session. Such collective experiences can bring Inner Order to a new level in both students and the Teacher!*

- Dialogues  
Individual Dialogues with each student becomes crucial for effective learning in Foundation Programmes. Problem setting with a fuzzy boundary can create a ‘ground’ for ‘Dialogue Process’ of a different kind. Educator can steer the dialogue to a ‘Reflective pause’, leading to ‘Active Silence’ where the educator is a partner. What more, such reflections, which go beyond material concerns has the potential for ‘insights’ to experience ‘Spiritual Silence’.

We need new strategies to achieve close relationship with students when the numbers are increasing. Educators need to address the issue as a group. Involving Alumni, guest faculty with this specific role. Informal councilors with professional knowledge can be additional strategy.

## 6.0 New Ideas from scientific and philosophical studies

Some ideas from prominent thinkers in Phenomenology and Cognitive Science mentioned below will be starting points to link with notions of 'Silence' and 'Active Silence' in 'Arupa frame work' to incorporate all senses.

- Merleau-Ponty: Embedded Cognition (13)  
Merleau-Ponty's philosophy emphasizes the importance of direct experience and intentionality. He advocates for understanding things from the perspective of "lived experience" rather than abstract analysis. This approach has gained significance in design, as it aligns with the need for design education to integrate direct, embodied experiences into the learning process.
- Francisco Varela: Embodied Mind (14)  
Varela, along with co-authors, introduces "enactive cognition," (learning through direct experience and interaction with the environment.) a new perspective on tactile and kinaesthetic senses relevant to design. This enactive approach suggests that cognition arises from the dynamic interactions between the body, mind, and environment, which is crucial for design education focusing on mindfulness and the inner order of the learner.
- Shaun Gallagher: How Body Shapes Mind (15)  
Gallagher differentiates between "body schema" (sensory-motor capacities functioning without conscious awareness) and "body image" (perceptions and attitudes towards one's body). This distinction helps design educators understand how unconscious and conscious responses play a role in learning and how bodily experiences can inform design thinking.
- Thomas Fuchs: Ecology of the Brain and Circularity of the Embodied Mind (16)  
Fuchs introduces the concept of the "circularity of the embodied mind," which emphasizes the reciprocal interaction between the mind, body, and environment. This circularity is crucial in design education, as it underscores the need for environments that support dynamic learning interactions. Fuchs' ideas advocate for an educational framework that integrates mental states with bodily experiences, influencing how design students perceive and interact with their surroundings.
- Michel Gelb: Alexander Technique and Body Learning (17)  
Michel Gelb popularized the Alexander Technique, which focuses on improving posture and movement to enhance well-being and reduce stress. Gelb's approach to body learning is relevant in design pedagogy, as it emphasizes the importance of physical awareness and balance in creative problem-solving.

## 7.0 Incorporating Multi-Sensory Experiences

New inputs from Merleau-Ponty, Francisco Varela, Shaun Gallagher, Thomas Fuchs, and Michel Gelb, along with concerns of design visionaries like Donald Schon, Pallasma and Nigel Cross give us a new impetus for inclusion of multiple senses in New age foundation. Arupa frame work takes us further to look at all sense perceptions as orders with insights on Spiritual and Active Silence (Intentional Silence).

### 7.1 Senses of Vision and Sound

'Visual language' in design is well developed and dominates current pedagogy. It is 'abstract' in nature and not interpreted metaphorically through language. Compared to this, 'Sound' is underutilized though it has the potential to deepen students' engagement and creativity, much like visual tasks in foundational design exercises.

## 7.2 Sense of Smell

Inclusion of the sense of smell in foundation programmes has the potential to enrich the learning experience. Smell, often overlooked in design pedagogy, can be used to trigger creativity, evoke deep memories, and influence mood. It has the potential to trigger creativity and shape the inner order of an individual. It is a powerful tool for accessing deep memories and emotions, which can be pivotal in the creative process. Unlike other senses, smell is closely tied to the limbic system, which governs emotions and memories, making it uniquely capable of influencing learner's cognitive and creative processes.

## 7.3 Sense of Taste

Taste can be a way to explore new avenues of creativity and innovation in design. An innovative concept of 'Active Silence of Taste', is suggested, which refers to the mindful, meditative attention one can give to the act of eating, where full awareness of the sensory experience of taste can foster creativity and deeper sensory engagement. This perspective challenges the often overlooked or purely functional view of taste in design and suggests that intentional focus on taste can play a significant role in enhancing creativity and the design process (Form of Taste<sup>1</sup>)

## 7.4 Touch and Kinaesthetic Senses

Touch and Kinaesthetic senses are fundamental to understanding and interacting with the world, and their presence in design pedagogy are critical to develop cognitive and imaginative abilities. These senses are not just supplementary but foundational to the way designers understand and engage with the world, leading to holistic pedagogy that includes the full spectrum of sensory experiences. This shift acknowledges that design is inherently a multisensory practice, and engaging all the senses can lead to deeper, more intuitive, and innovative design outcomes.

*Arupa framework brings attention to 'Active Silence' in each of the sense perceptions, which affects the 'Inner Order'*

## 8.0 Strategies from Innovative experiments

Many Strategies collated from my past Innovative experiments which can become guiding factors in 'arupa' framework to evolve '*New Age Foundation in design Pedagogy*'

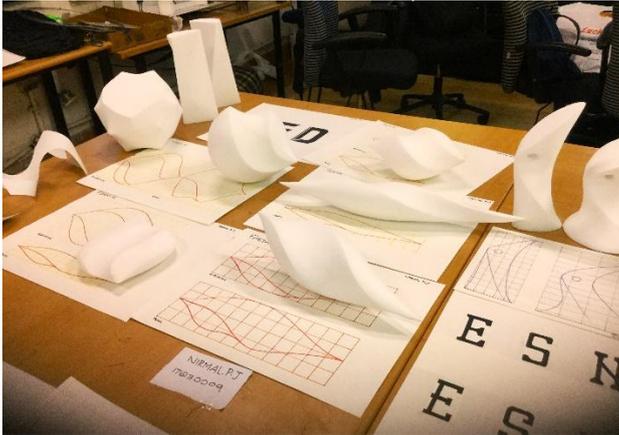
### 8.1 Syntactic to semantic zone

Problem setting as a strategy can take foundation tasks from Syntactic to Semantic zone, as discussed with the task of textures on aluminum at NID and IDC, in an earlier article. (4). Task in

clay, 'akshar Devata' deliberated in this article (3.2.3) brings out the nature and advantage of moving into Semantic zone.

### 8.2 Formats from Other Fields

- D'Archy Thomson, in his well-known book, 'Form and Growth', brings out how 'order' in Nature can be decoded using varying patterns of grids. These have been inspirational in Typographic design. I used these grids as a basis of imagination in 3D in a Form Course for M Des at IDC



Student outputs from Form Course at IDC

- 'M.C.Echer's' technique of figure changing into ground vice versa gradually can be effectively adopted with 'numbers and letter-forms' as a strategy.

### 8.3 Short tasks

As discussed in 6.1, with large numbers to keep the students get engaged is a challenge. Short tasks of 40 minutes to one-hour duration, connected to the basic theme, which demand creative response from the students is a good strategy. Few of them are discussed below.

#### Short task 1.1

**DE 203-3D Form Studies I-Part 1**  
a g rao

**17-7-17 to 24-7-17**  
**B Des , 2nd year**

#### **Problem1: What is a Cube?**

**Time: 40minutes**

We have a visitor from another planet. the 'Alien' asks you: What is Cube?  
Write one-page note to make the alien understand cube? You can draw sketches if you want.

Student responses:

solution 1.1

RISHABH  
160130003

## CUBE

This white object, thing surrounding the words you are reading is called a 'paper'. Now this paper has boundaries - one, how long these sentences can be and second the number of sentences I can write below the previous one, lets call them breadth & length respectively.

Now lets compare their two dimensions & to do that lets start

Writing in different manners

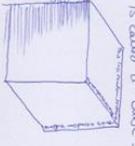
Now in this orientation I can write a bigger sentence than the first one up there  $\leftarrow$ . So right now the length is bigger than the breadth. Now lets say we tear this paper to make sure sentences written in both the orientation are equally long. That paper then would be called to be a square. And will look something like that



Now if I give you one more ~~paper~~ and ask you to place it above previous and continued, you'll have a stack of papers



& now lets ~~write~~ ~~under the stack~~ give you paper only enough so that if you were to write on different papers at  $\textcircled{3}$  the sentence just fits in. Now you'll end up with a physical body with three equally long sentences in three different orientation. This 'body' that you'll see is called a 'cube'. AND will look something like



Often students want to show their creativity in the layout order in writing. System level operations tend to curtail such creativity for operational convenience in later use.  $\square$  Tolerance of such behaviour becomes a challenge to educators.

Solution 1.2

RISHABH  
160130003

## CUBE

This white object, thing surrounding the words you are reading is called a 'paper'. Now this paper has boundaries - one, how long these sentences can be and second the number of sentences I can write below the previous one, lets call them breadth & length respectively.

Now lets compare their two dimensions & to do that lets start

Writing in a different manner

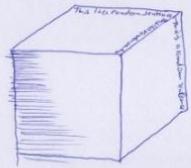
Now in this orientation I can write a bigger sentence than the first one up there  $\leftarrow$ . So right now the length is bigger than the breadth. Now lets say we tear this paper to make sure sentences written in both the orientation are equally long. That paper then would be called to be a square. And will look something like that



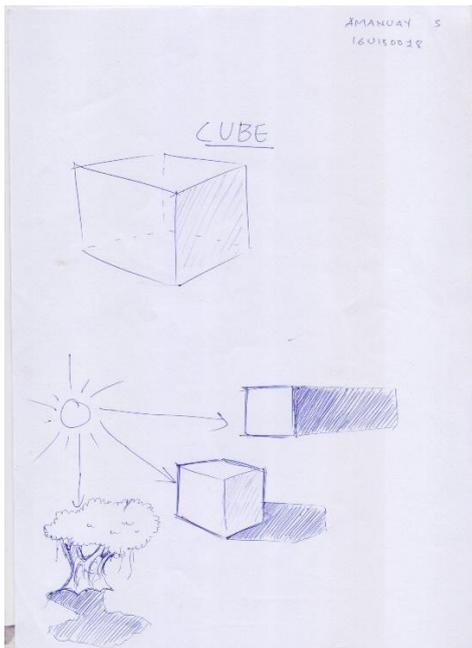
Now if I give you one more ~~paper~~ and ask you to place it above previous and continued, you'll have a stack of papers



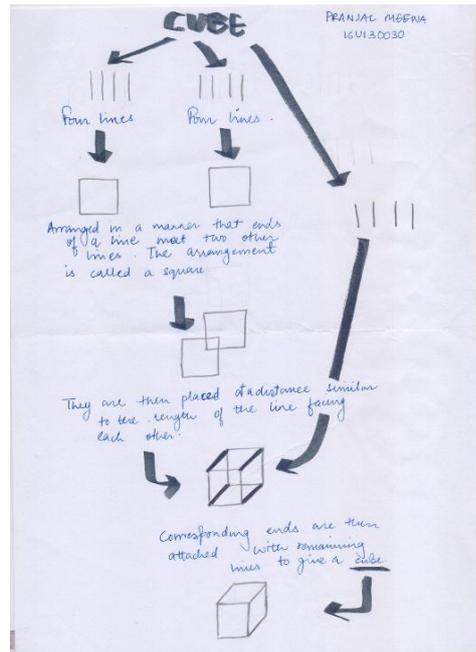
& now lets ~~write~~ ~~under the stack~~ give you paper only enough so that if you were to write on different papers at  $\textcircled{3}$  the sentence just fits in. Now you'll end up with a physical body with three equally long sentences in three different orientation. This 'body' that you'll see is called a 'cube'. AND will look something like



### Solution 2



### Solution 3



### • Short Task 1.2

#### What is a cube?' at DJ Academy

I had given the same problem which I had tried B-Des students.

But to my surprise response was poor! After 5 or 10 minutes, I realized that they perceived the problem as mathematical and were unable to connect with the problem. Demand for 'thinking task of abstract nature', did not enthuse them. I changed the parameters. I asked them to treat it as evening over tea home work! They can work in small groups of 2 or 3 formed on their own and present it in a Theatrical mode next day, and gave a tea brake! 😊

I had come to know that they had a 'Theatre experience session' as part of another class a week back and had enjoyed their participation.



New problem posed was, 'What is a cube? 'Explain and Enact' to a 'being from another planet' in small groups. This triggered an enthusiastic participation and the exercise moved into body learning zone as seen on the next day.



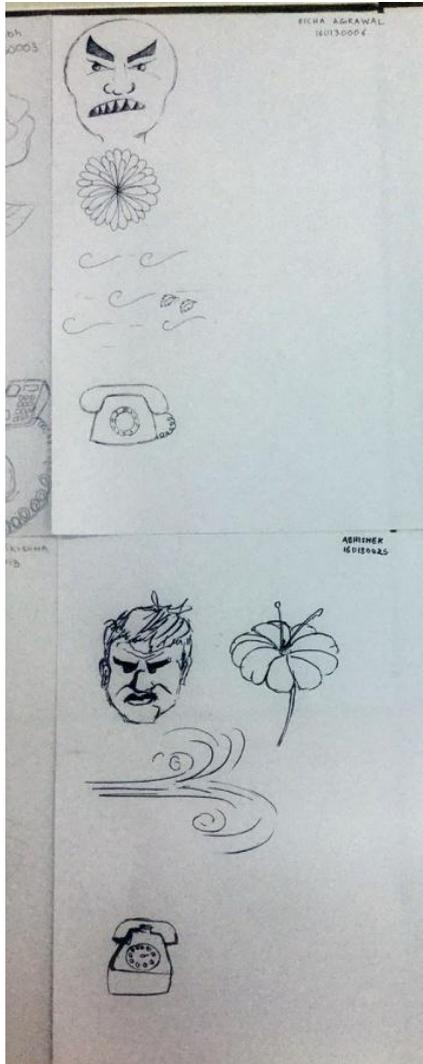
DJ students enacting, what is a cube' as seen from a person from another Planet.

- Short task 2

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### 3Day module for B des as part of 'Art and Design Fundamentals 3

Day 1: Draw an Angry face, a Flower, Wind, Telephone



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Short tasks kept the whole class engaged. Students immensely enjoyed the session. Allowing free exchange and sharing solutions with others while working, transformed the task from a typical 'test', which they were used to earlier, into a session in 'social-interactive Learning'. All the answer-sheets were collected, which also acted as attendance check! Next day all the sheets were put on the board, so they could see each other's solutions! Most of them compared their own solutions with others' on their own initiative!

*No 'grade' or 'marks' to compare, created a 'tension free mind' to look at others' thinking strategies' appreciatively and objectively.*

I also used to give feedback on the 'strategies of thinking , each student had adopted later on the day.



## 9.0 Adopting new digital Technologies-AI, VR,..:

### Ushering in New Aesthetic Order

In an interesting way, Covid-19, brought an 'insight' to design education. Educators who used to be totally dependent on physical contact and action in the class room started experimenting with on-line digital modes.

Yet another breaking point is by AI supported tools like chat GPT in addition to several AI supported graphic packages. The ease with which one can generate alternative solutions have suddenly brought attention to need for conceptual learning. A new aesthetic Order blending conceptual thinking and body learnings is inevitable.

Some implications of AI, VR and other digital technologies

#### 9.1 Imagination with AI and VR

It is clear that 'Design Learning' needs to start with 'actual making' i.e., physical experience. However, power of 'Digital mode with 'AI' and 'Virtual Reality'(VR) can be brought in to picture, to develop Imagination in new zones *Innovatively*.

##### 9.1.1 In 'Arupa framework, language can become a strategic tool for using power of AI tools.

In an earlier article, *Arupa' the 'Implicate Order' as a New frame-work for 'Form and Design'-one (1)*, how language can become a strategic tool to reveal various manifestations (rupas or shapes) of a product like 'chair' has been brought out. Similar strategy can be adopted to develop 'imagination' in multiple senses.

To explore kinaesthetic sense with 3d form transition task.

- *Imaginative, intriguing and humorous narrative scenes*, can be given as problem statements.

or

- *A 'context' can be articulated where the new shape 'occurs'.*

Responding with 3D shapes digitally for such new challenges would be the new zone of training in 'imagination' of students. Power of language and ease of translations like textures in 3D-printing can give additional scope for 'New age foundation programme' in Design.

##### 9.1.2 New technologies like VR can make 'craft learning experience' in remote areas possible. Even new cultural surroundings in different Countries can be experienced, leading to Global Learning Experiences (GLEs). New technologies can enable such

GLEs to take place in design schools, started in remote parts of the Countries whether it is in India, Nepal or Africa!

#### 9.2 Preparing for new Fantasies of Future ☺

- A teacher switching on 'smell switch' which gives 'coffee aroma' in a class to make students attentive without drinking coffee!
- A digital company having a daily 'smell sequence' for its employees:  
It would start with a pleasant mood created by smell of *freshly cut grass*, followed by *cinnamon aroma* for attentive work. Next comes a lunch break with *vanilla aroma* followed by *aroma of coffee* for a group meeting and so on. All the smells will be triggered digitally through net communication. Time engagement slots with each smell will be planned as required for a particular day!
- A modern Museum allowing a visitor to touch a bamboo basket and taste a tablet which triggers a taste of a rare dish cooked in bamboo in Nagaland associated along with 'aroma of that period'.



## 10. Spreading across disciplines

Many other disciplines are recognizing the virtues of 'holistic learning' compared to restrictive narrow boundaries. There is a need for design to take the lead for the benefit of Society in general.

### 10.1 Creating Strategic role for Design

With AI and VR tools Design will acquire a new strategic position to transform other disciplines like Medicine, General Education, etc.

Training for such a strategic role will be the challenge in *New Age Foundation in design* for educators

### 10.2 Process Documentation

For research and spreading across other disciplines, Process Documentation is essential. It can ensure the effectiveness of holistic nature of New Age Foundation in design.

In the new frame work documenting teaching-learning experiences both by Student and Teacher is necessary.

Teacher's documentations have not been prevailing practice! Teacher has the advantage of having access to the Teaching Learning Process(TLP) over a period with different student groups. *This is a potential research material to develop the frame work for designers as well as for dialogue with other professions which have similar operations.* For example, surgeons need to know as much of 3D geometry as designers, may be in different context, with live organic materials. But the kinesthetic, tactile sense experience would have commonality.

### 10.3 Cross disciplinary platforms

It would be indispensable to build cross disciplinary platforms with design as common concern. Bonsiepe's concept of 'design interface'(18 ) is a significant input to take it further.

## 11.0 Conclusion

"Arupa the Implicate Order" framework provides a novel approach to design education, focusing on imagination, multi-sensory learning, and active silence. It calls for educators to adapt to modern challenges, including digital tools and larger classes, while fostering creativity and holistic learning. By integrating insights from philosophy and cognitive science, the framework aims to reshape design education for the contemporary world, promoting a more mindful and inclusive learning environment. Implementation of all the frame work may look as a daunting task to new design schools. Some strategies they can adopt are

- Gradual 'step by step' adaptation.
- Forming a 'pool' of likeminded faculty across the institutions to share experiences and support each other.
- Approach funding agencies to support 'faculty training programmes'.

### *Epilogue*

*Design needs to take a lead in passing its virtues to other fields for a holistic transformation of Society. Arupa the Implicate Order can become a shared framework with new collaborations across the disciplines.*

The framework brought out in this article also becomes a screen to look at student outputs of the tasks introduced by me with the spirit of 'Arupa the Implicate order' at IDC and other places over the years for a series of upcoming articles. -

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## References

1. Rao, A. G. (2023). *Arupa: The implicate order as a new framework for form and design*. Retrieved from <http://www.agrao.in/images/Articles/arupa-implicateorder-one.pdf>
2. Rao A G, Arupa-in-pedagogy-of-design-form-of-silence-1, Retrieved from <http://www.agrao.in/articles-papers-and-talks/149-arupa-in-pedagogy-of-design-form-of-silence-1>
3. Rao A G, Form-of-smell-arupa-in-pedagogy-of-design-2, Retrieved from <http://www.agrao.in/articles-papers-and-talks/150-form-of-smell-arupa-in-pedagogy-of-design-2>
4. Rao A G, Form-of-taste1-arupa-in-pedagogy-of-design-3, Retrieved from <http://www.agrao.in/articles-papers-and-talks/151-form-of-taste1-arupa-in-pedagogy-of-design-3>
5. Rao A G, Form-of-touch-and-kinaesthetic-senses-arupa-in-pedagogy-of-design-4 Retrieved from <http://www.agrao.in/articles-papers-and-talks/156-form-of-touch-and-kinaesthetic-senses-arupa-in-pedagogy-of-design-6>
6. GordonWJJ, Synectics: The development of creative capacity
7. David Bohm, F. David Peat: Science, Order and Creativity, 1987, Routledge, 2nd ed. 2000 (transferred to digital printing 2008, Routledge): ISBN 0-415-17182-2
8. Jiddu Krishanmurti, Can the mind be Quiet? Aleph Book Company,7/16 Ansari Road, Daryaganj, New Delhi 110 002
9. Rao A G, Inner Order and Working Order, Retrieved from <http://www.agrao.in/articles-papers-and-talks/148-inner-order-and-working-order-18-07-2023>
10. Creativity and Problem Solving –First workshop- Retrieved from [http://www.agrao.in/images/ExperiencesinTeachingAndLearning/Creattivity\\_first\\_workshop.pdf](http://www.agrao.in/images/ExperiencesinTeachingAndLearning/Creattivity_first_workshop.pdf)
11. Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass.
12. Ibid, (9)
13. Merleau-Ponty: Embedded Cognition Merleau Ponty, Phenomenology of Perception (1945), English Translation: Routledge & Kegan Paul, 1962 (Translated by Colin Smith)
14. Varela, F. J., Thompson, E., & Rosch, E. (2017). *The embodied mind: Cognitive science and human experience* (Revised edition). MIT Press
15. Gallagher, S. (2005). *How the body shapes the mind*. Clarendon Press.
16. Fuchs, T. (2018). *Ecology of the brain: The phenomenology and biology of the embodied mind*. Oxford University Press.
17. Gelb, M. J. (1995). *Body Learning: An Introduction to the Alexander Technique*. New York: Henry Holt and Company
18. Bonsiepe, G. (2000). *Design as tool for cognitive metabolism: From knowledge production to knowledge presentation*. Paper presented at the international symposium on the dimensions of industrial design research Ricerca+Design, Politecnico di Milano, May 18-20, 2000.

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