Prof Athavankar

Prof Athavankar began his career as a trained architect from the JJ School of Architecture, Mumbai. After graduating he began work in Architects Combine a firm, where he worked for 4 years (Dec 1969). He worked with Kamu Iyer who focused heavily on insights, discussions and debates related to the field of design philosophy, architecture and technology.

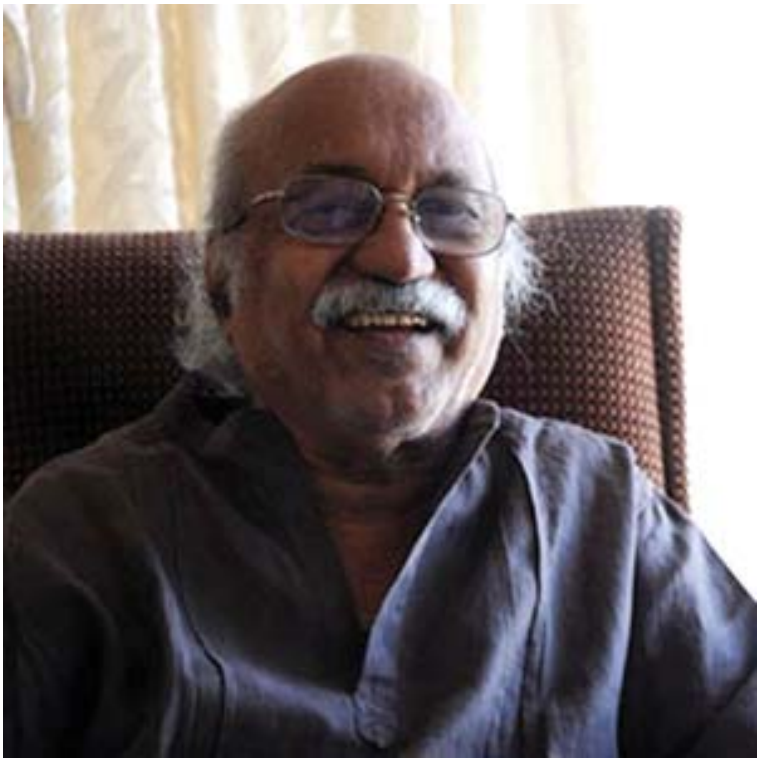
1. Kamu Iyer

In September 1969, a colleague informed him regarding a new department-The School of Design in IIT Bombay that would be involved in training students in Design. From an early age he frequented the Jehangir art gallery in Mumbai and kept abreast with the art movement, design history and Bauhaus. With the premonition that the School of Design might be something akin to the Indian Bauhaus he came to IIT.

2. Jehangir Art gallery

3. Classes in Bauhaus

The department was being spear headed then by Prof Sudhakar Nadkarni. The space then consisted of a single floor, which was constructed typically like an engineering department.



4. Sudhakar Nadkarni

5. IDC Beginnings

The year was 1970 and was a time when there were movements aimed at rebelling against regressive forces that were violently shaping global policies on one hand and the really young people using incredibly unconventional methods to protest and shape a newer future.

His entry was formalized by Prof V N Adarkar, Charles Correa and began in 1970. Because Prof Athavankar joined IDC at its nascent stage, many policies were experimented with when it came to teaching methods and technologies that the students could be exposed to.

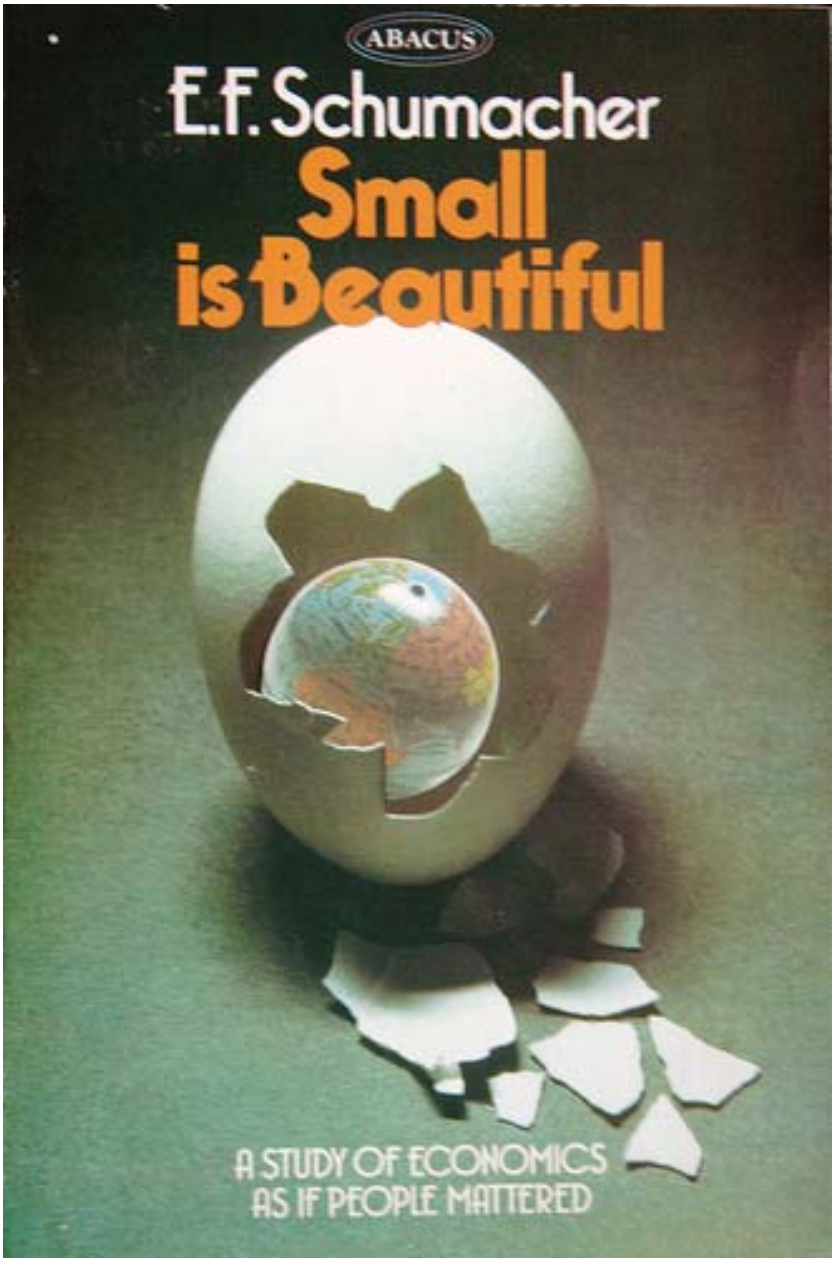
6. Charles Correa

7. VN Adarkar

Initially Bauhaus and HfG Ulm were thought as ideals for the system of education. But India had many cultural aspects and many problems that were really India-centric in nature. This led the faculty to conceive of a program that was tailored for the Indian demographic.

8. Ulm brochure showing Tomas Maldonado

He drew inspiration from such books as “Small is beautiful” by E F Schumacher, which dealt heavily with appropriate technology and context based problem solutions. There was a lot of political discourse, which aimed at development with social justice at its focal point.



9. Small is Beautiful by EF Schumacher

One such example is the redesign of the Ghamela making it easier for the construction worker to carry material with reduced effort.

Students were motivated and encouraged to work in projects that involved collaborating with NGOs to make product solutions for the benefit of the society.

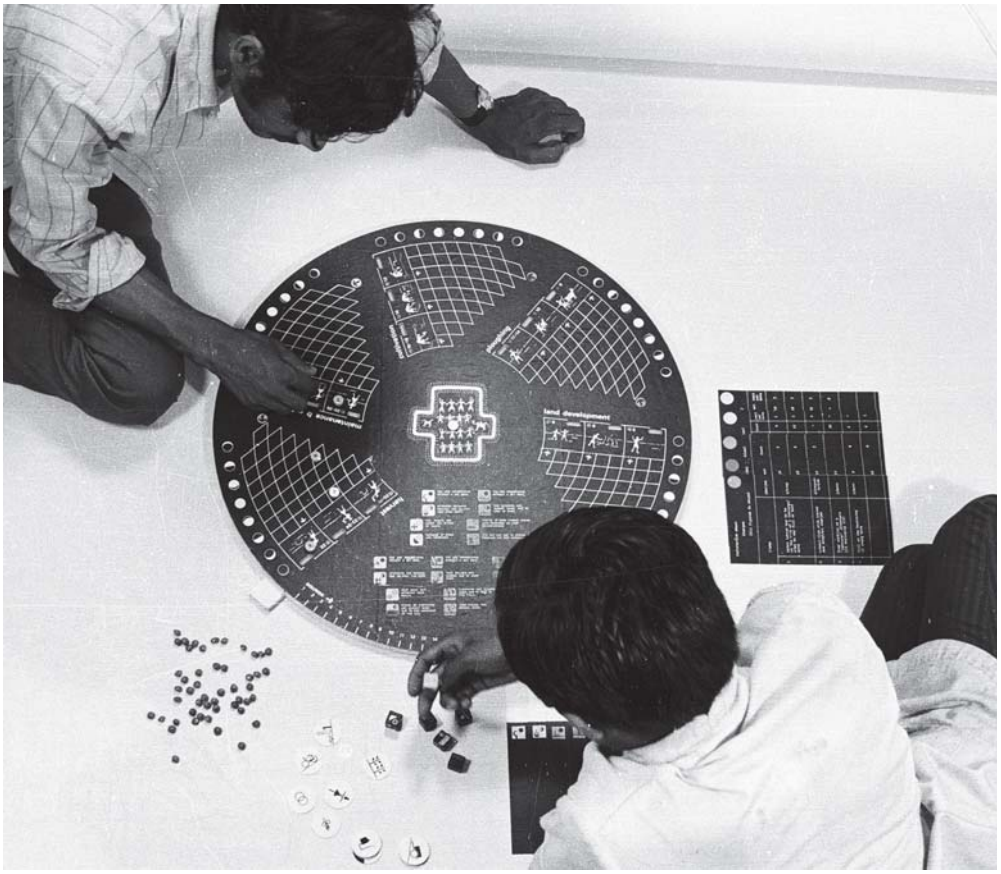
10. Ghamela-Early IDC Product

11. Construction workers handling the Ghamela on site

12. Traditional Ghamela

One of the first games that Prof Athavankar was involved with is, the Edugame-which was made to teach agriculture and rural development policies through the game. It won the award in the Edugame International Competition held at Israel.

13. Edugame-Board Game

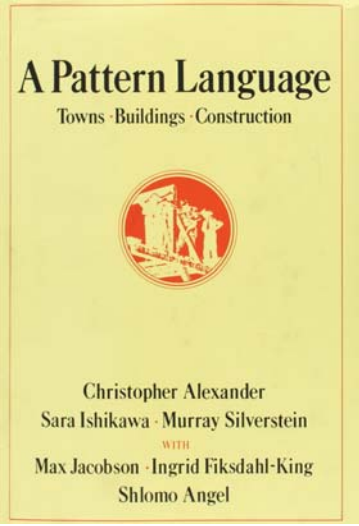


14. Edugame-Game play elements

Up till then due to the License Raj, it was very difficult for the first generation of designers to make an impact in a choked industrial environment. It was only during the early 80's with the opening up of the market and then later in the 90's, as an influx of global products flooded the market, that there was a need for competitive products that were of Indian origin, as result the need for young designers was felt in emerging industries.

15. Indira Gandhi approving files during License Raj

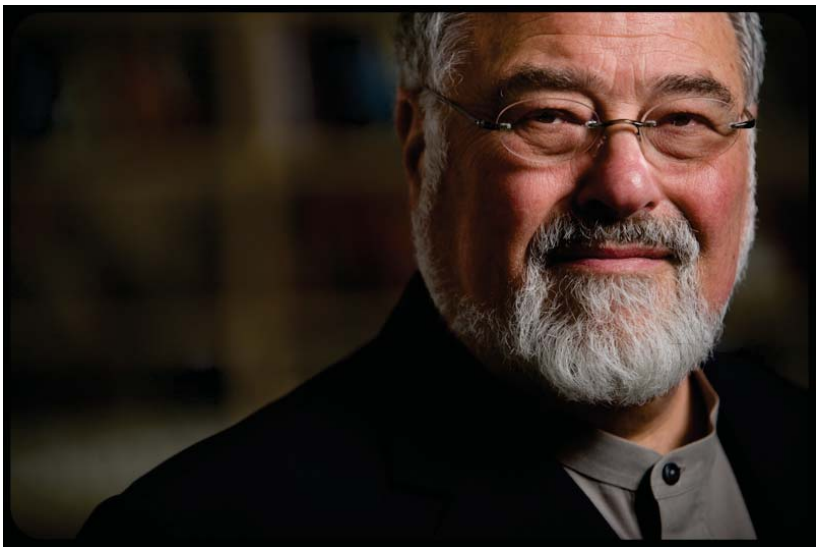
During this time there was considerable progress in design methodology to map methods to understand what people need and how to go about solving problems related to systematic thinking. People like Edward de Bono and Christopher Alexander were instrumental in a lot of work in this area.



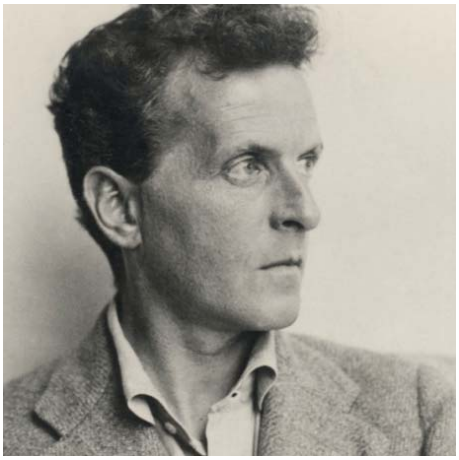
16. Pattern Language by Christopher Alexander

17. Entire village Christopher Alexander

PhD at Illinois Institute of Technology:
In IIT Chicago, he immersed himself in the areas of cognitive sciences; IIT Chicago had a lot of courses related to cognitive psychology, which formalized his understanding of Gestalt principles. Prof Brook was the mentor over there, who introduced him to the works of Eleanor Rosch and categorization theory, which he introduced in IDC when he came back. Because the work is incredibly tedious, he chose gamification as tool to make it easier for the students to digest. From Rosch's work with natural objects and form, he extended it to man-made objects through Product Semantics. Along with Ludwig Wittgenstein and George Lakoff's work, he finely tuned and taught the course on Product semantics.



18. George Lakoff



19. Ludwig Wittgenstein

In 2005 Prof Athavankar got a UNESCO funded project creating toys-games in India. Due to China's dominance in manufacturing and production abilities then, it did not seem like a wise move to invest time in making toys, he then applied his earlier learning of game design and cognitive science to create games which can be fun but based on design thinking and learning. Game design was of great interest, as a game doesn't inherently solve a real life problem, how does one apply design to creating a game. Here he tried analyzing problems and devise solutions through design methodology. He developed the course through teaching and formulated many principles and executed several games made by the students through the modules, through toy and game companies like Funskool. He used game design as a platform for better education and affordable learning practices through fun. As a lot of games executed and produced still cost a lot of money, he came up with the concept of designing, zero-cost games, albeit with a lacuna in marketing these zero-cost games.

20. Games Design workshop

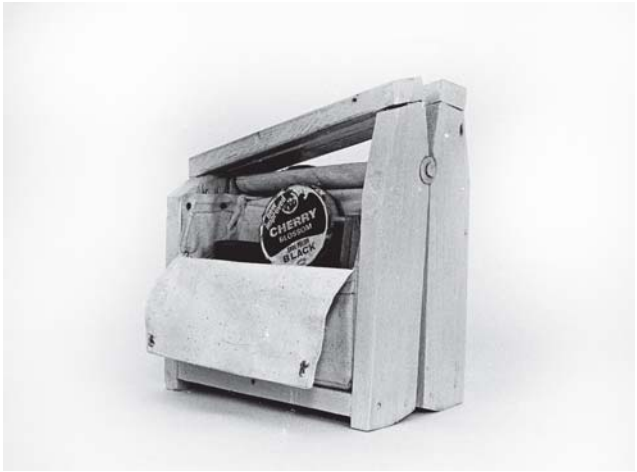
21. Games Design workshop

22. Games Design workshop

23. Games Design workshop

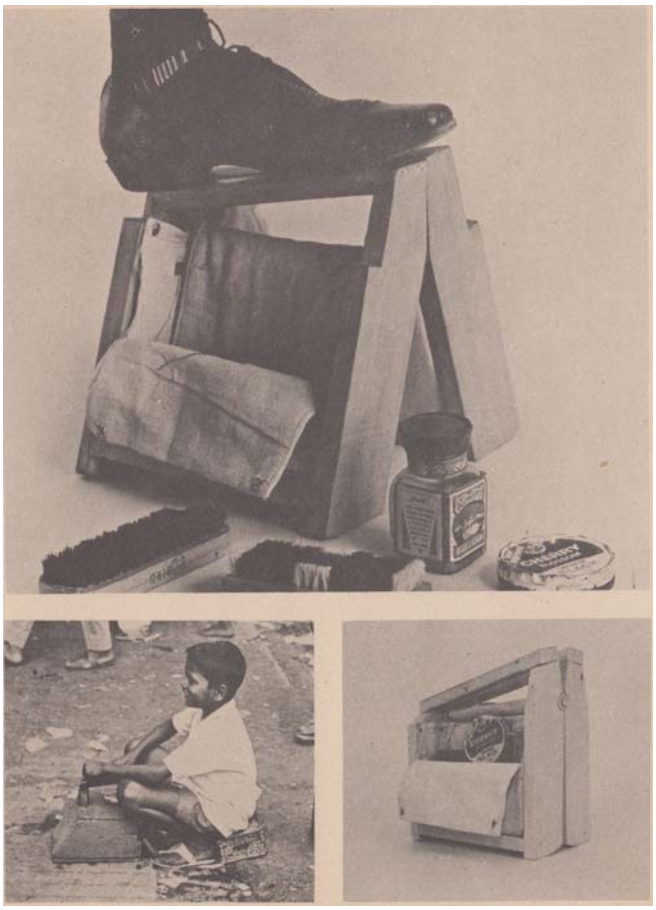
Projects:

IDC has always sought collaboration with NGOs and manufacturing industries. This has its moorings in the philosophy of learning by doing, to sharpen design and systematic thinking abilities to solve real-world problems.



24. Early IDC product: Boot-polish stand

25. Early IDC product: Boot-polish stand



26. Early IDC product: Boot-polish stand

The Postbox:

Prof Athavankar's first project, as an industrial designer in IDC was the redesign of the Postbox. The old "parrot" post box had many complaints like rusting, access issues and vandalism.

This project involved several ergonomic studies, people watching or ethnographic studies and user research.

27. The old postbox usability issues

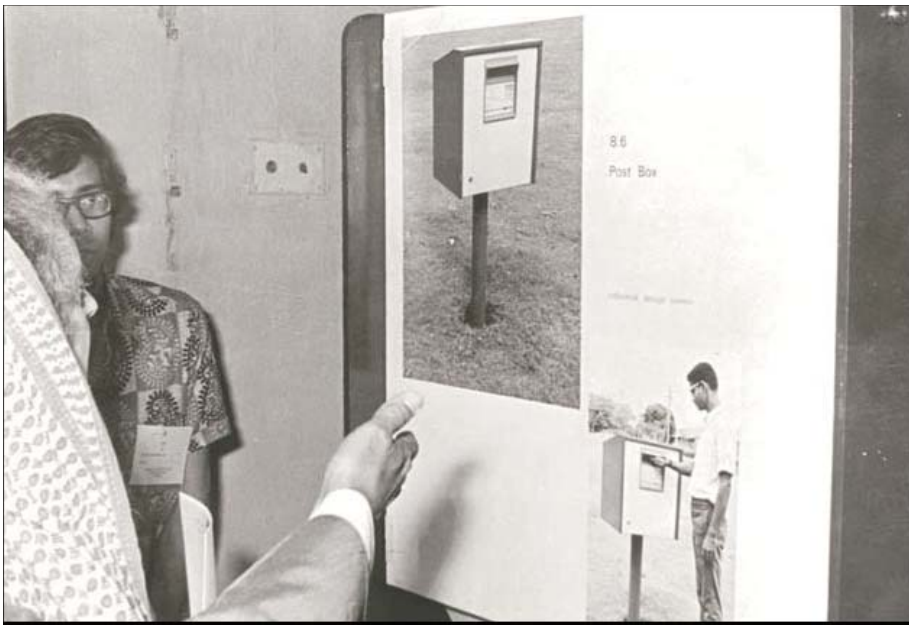
28. The old postbox usability issues

29. The new postbox


30. Postbox: endless presentations

The project had several pitfalls, as cutting across the red tape became the biggest hurdle during the 70's "License Raj". This indecisiveness was resolved when IDC was finally commissioned to prototype the post-boxes. One of these was installed in front of the then PM Indira Gandhi. It so happened that she came to IIT for the 1972 convocation where she came across the post box yet again in the IDC exhibition space.

31. Indira Gandhi at the IITB Convocation



32. Reviewing the post box

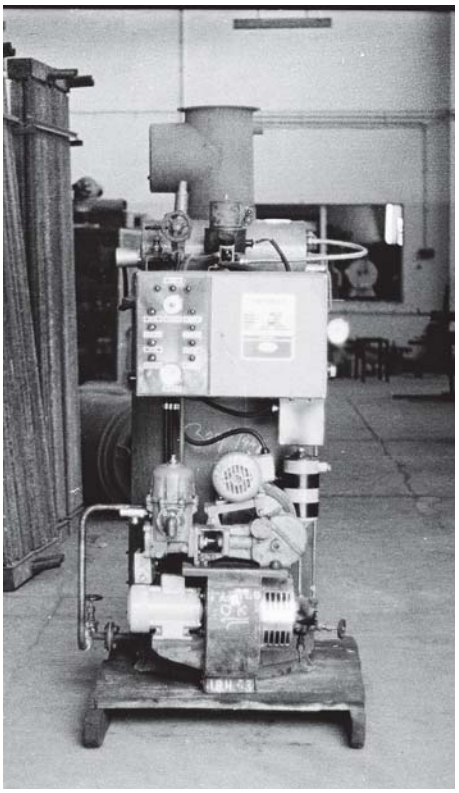
She immediately asked for the manufacturing and installation of these postboxes.

One of the many insights was: Initially brass locks were used which were often picked and sold

for scrap value. Thus it became a necessity to have an internal lock. But manufacturing through various vendors often caused harsh distortions in the original design.
So much so that it was finally decided to scrap the project.

Wanson's Boilers:
These boilers were simply activated using a single switch. Over the years various functionalities were added on and resulted in a complicated control panel.


33. The old Wansons boiler



34. Wansons boiler: Inside out

Prof Athvankar was given the job of increasing its usability along with its aesthetic appeal. The success of this project encouraged Wanson to commission a new design for the boiler house as well.

35. Prof Athavankar working on the Wansons boiler

36. The new Wansons boiler

With the open market came new systems for development, one such was CDOT, which involved low cost rural telephone exchanges. CDOT was one of the early technocratic institutions that had fast-track executions.


37. CDOT phone-booth


38. CDOT phone

ASAN-NCR ATM: The company had commissioned the project as they were trying to understand the challenges in India when it came to using the ATM. An example being, poor-low literate people really appreciate ATM systems as the machine never gets angry or bears prejudices against low-literate people. This company was willing to gamble and select a non-conventional model to explore changes across cultural difference. One of the main users was Kotak.

39. Award for Design of NCR EasyPoint 57i ATM: ASAN for NCR, Prof U A Athavankar, Prof V P Bapat and Prof A Joshi

Samsung had a project where Prof Athavankar and his students came up with interesting use-cases for the fridges, which were eventually implemented by Samsung.

40. Samsung Refrigerator

41. Samsung Refrigerator features

Another observation through his project, is regarding the variance in terms of learning curves across different age groups in India. He mentions how a fellow passenger, who was a farmer was able to manage many problem solving activities, over the phone while travelling, even though he was low-literate, through deciphering the patterns.

"Product Design" evolution of the word:
Prof Athavankar says that, the meaning of product design has also changed over the years; from 1970 the focus was in using design for solving social problems in a “developing country” or “third world problems”. This has changed between the 80’s and 90’s as the open market made design solutions techno-centric in nature, which brought about a shift from developing countries to “ emerging market ”. Which changed recently with India’s integration with the

global market. As software became an integral part of products and services, product design and its meaning evolved, with embedded technology, newer definitions are required in design education, else Prof Athavankar says we are falling behind compared to other countries.

Prof Athavankar feels design process and the language attached to it have slowly become more casual. The word “user” slowly gets replaced with “stakeholder”. Psychological aspects are brought into the focus. “User” also becomes "player". What was once “product form and semantics” with its own science, has become “look and feel”.

Major influences:
Some of the people who have had influence on Prof Athavankar’s work are Prof Kohei Sugiura- his work ethic and discipline is incredibly inspiring. Prof CK Prahalad is particularly inspirational as he brought the focus back to the bottom of the pyramid and India’s unmet needs. Another inspiration through reading is Rama Bijapurkar and her analysis of the Indian society.

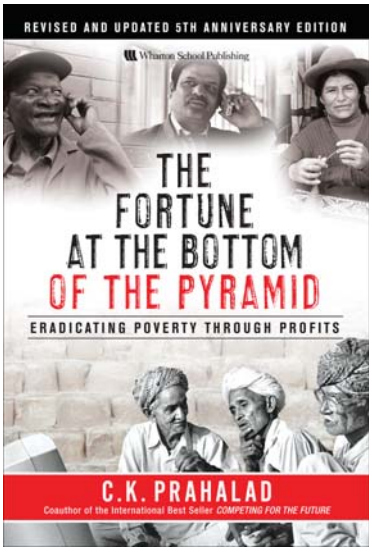

42. Kohei Sugiura


43. Works of Kohei Sugiura

44. Works of Kohei Sugiura

45. Works of Kohei Sugiwura

46. CK Prahalad



47. CK Prahalad bottom of the pyramid

48. Rama Bijapurkar

Arthur Pulos is cited as particularly inspirational as he provided a lot of confidence in the late 70's and early 80's. An American designer, he came to India during UNDP program. He was a staunch proponent of –by the designer for the designer movement, he helped conducting design projects, events and workshops .

49. Arthur Jon Pulos

Sam Pitroda from C-DOT is another figure that was influential in the way he got work done and his positive energy was contagious. He is another proponent for Indian design and technology.

50. Sam Pitroda

Indianness:

One of the major contentions for Prof Athavankar has been the inability of product designers and architects to bring out the Indianness in products. A Marathi play called " Mulgi Zaali Ho!" "It is a girl child!" where there were no sets, the people themselves were the sets, sparked an idea as to how he could bring out Indianness in both the contemporary and the traditional sense. He used some of these principles to create a chair, which allowed squatting. He used principles and elements from office chairs, traditional Indian clothing the principle of the age old Munda. His creation has been the experiment in bicultural design. Where issues related to environment, semantics, cultural need to be addressed simultaneously.

He says that, product design definition needs to take into account that products have become information processors. And eventually will be without tangible hardware like-mobile applications. Yet these satisfy the basic criteria of product design problems in terms of need, users and design methods. This he says is something we still are not looking at intently in both design process as well as design education and are thus lagging behind. He questions the need for separation of terms product design and interaction design.

51. IDC Family

He now keeps himself occupied by creating games that can be used as a tool for data gathering. Giving newer insights into the process of decision-making, thus creating more finely tuned products.

Image references:

1. Kamu Iyer: Anon, (2016). [online] Si.wsj.net. Available at: http://si.wsj.net/public/resources/images/BN-FB327_ikamu9_G_20141017030810.jpg [Accessed 1 Apr. 2016].
2. Jehangir Art gallery: Anon, (2016). [online] Dumkhum.com. Available at: http://dumkhum.com/wp-content/uploads/2012/10/Street-facing-Jehangir-Art-Gallery.jpg [Accessed 1 Apr. 2016].
3. Classes in Bauhaus: Anon, (2016). [online] S-media-cache-ak0.pinimg.com. Available at: https://s-media-cache-ak0.pinimg.com/236x/5d/64/be/5d64be7a5c322084f08210be3e5f1ca3.jpg [Accessed 1 Apr. 2016].
4. Sudhakar Nadkarni: Anon, (2016). [online] Designinindia.net. Available at: http://www.designinindia.net/design-thoughts/teachers/sudhakar-nadkarni/images/sudhakar-nadkarni.jpg [Accessed 1 Apr. 2016].
5. IDC Beginnings: IDC Archives
6. Charles Correa: Anon, (2016). [online] B.fastcompany.net. Available at: http://b.fastcompany.net/multisite_files/fastcompany/imagecache/1280/poster/2015/06/3047539-poster-p-1-charles-correa-called-indias-greatest-architect-dies.jpg [Accessed 1 Apr. 2016].
7. VN Adarkar: Courtesy of Prof Sudhakar Nadkarni
8. Ulm brochure showing Tomas Maldonado: Anon, (2016). [online] Grainedit.com. Available at: http://grainedit.com/wp-content/uploads/2014/01/hfgulm-1.jpg [Accessed 1 Apr. 2016].
9. Small is Beautiful by EF Schumacher: Anon, (2016). [online] Farm2.static.flickr.com. Available at: http://farm2.static.flickr.com/1172/1463622804_e7f70ed97c_b.jpg [Accessed 1 Apr. 2016].
10. Ghamela-Early IDC Product: Decade of Design-IDC, IIT B, 1980
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14. Edugame-Game play elements: Decade of Design-IDC, IIT B, 1980
15. Indira Gandhi approving files during License Raj: Anon, (2016). [online] Guruprasad.net. Available at: http://guruprasad.net/wp-content/uploads/2013/10/indira_approving_files.jpg [Accessed 1 Apr. 2016].
16. Pattern Language by Christopher Alexander: Anon, (2016). [online] Ecx.images-amazon.com. Available at: http://ecx.images-amazon.com/images/I/71xPCk7WwKL.jpg [Accessed 1 Apr. 2016].
17. Entire village Christopher Alexander: Anon, (2016). [online] 2.bp.blogspot.com. Available at: http://2.bp.blogspot.com/-vW9ojUP_P64/UXxKqzhHHPI/AAAAAAAABzM/fBDwT0RavZQ/s1600/Entire+village.jpg [Accessed 1 Apr. 2016].
18. George Lakoff: Anon, (2016). [online] Bartnagel.com. Available at: http://www.bartnagel.com/latest/images/George_Lakoff.jpg [Accessed 1 Apr. 2016].
19. Ludwig Wittgenstein: Anon, (2016). [online] Wittgenstein-initiative.com. Available at: http://wittgenstein-initiative.com/wp-content/uploads/2015/01/ludwig-wittgenstein-e1420817612309.png [Accessed 1 Apr. 2016].
20. Games Design workshop: IDC
21. Games Design workshop:IDC
22. Games Design workshop: IDC
23. Games Design workshop:IDC
24. Early IDC product: Boot-polish: Decade of Design-IDC, IIT B, 1980
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36. The new Wansons boiler: Decade of Design-IDC, IIT B, 1980
37. CDOT phone-booth: Anon, (2016). [online] Static1.squarespace.com. Available at: http://static1.squarespace.com/static/5356af05e4b095ff0fea9e11/5383ed01e4b00a843b793e96/5394fd30e4b0d0ce5543fb77/1429751145062/scan0358.jpg [Accessed 1 Apr. 2016].
38. CDOT phone: MIT Press Journals - Design Issues - Citation. (2016). [online] Mitpressjournals.org. Available at: http://www.mitpressjournals.org/doi/abs/10.1162/074793602320223280?journalCode=desi#.Vv54iZOF5t8 [Accessed 1 Apr. 2016].
39. Award for ASAN NCR ATM: Awards for IDCians: Industrial Design Centre at IIT Bombay. (2016). [online] Idc.iitb.ac.in. Available at: http://www.idc.iitb.ac.in/events/idc-awards.html [Accessed 1 Apr. 2016].
40. Samsung Refrigerator: http://www.idc.iitb.ac.in/uaa/SamsungRefrigerator.html
41. Samsung Refrigerator features: http://www.idc.iitb.ac.in/uaa/SamsungRefrigerator.html
42. Kohei Sugiwura: LIFE is INTERACTIVE. [online] Pg01-idm-ray.blogspot.in. Available at: http://pg01-idm-ray.blogspot.in/ [Accessed 1 Apr. 2016].
43. Works of Kohei Sugiwura: Anon, (2016). [online] Karlandersson.se. Available at: http://karlandersson.se/wp-content/uploads/20131008_143625.jpg [Accessed 1 Apr. 2016].
44. Works of Kohei Sugiwura: Work. (2016). [online] Mariko Yokogi. Available at: http://www.marikoyokogi.com/#/experiments-in-time-distance-map/ [Accessed 1 Apr. 2016].
45. Works of Kohei Sugiwura: Kohei Sugiura. (2016). [online] Magzter.com. Available at: http://www.magzter.com/news/193/405/092015/d7hvd [Accessed 1 Apr. 2016].
46. CK Prahalad: C.K. Prahalad. (2016). [online] Quality Gurus. Available at: http://www.qualitygurus.com/gurus/list-of-gurus/ck-prahalad/ [Accessed 1 Apr. 2016].
47. CK Prahalad bottom of the pyramid: Anon, (2016). [online] Upload.wikimedia.org. Available at: https://upload.wikimedia.org/wikipedia/en/thumb/e/ea/The-fortune-at-the-bottom-of-the-pyramid.jpg/220px-The-fortune-at-the-bottom-of-the-pyramid.jpg [Accessed 1 Apr. 2016].
48. Rama Bijapurkar: Anon, (2016). [online] I.ytimg.com. Available at: https://i.ytimg.com/vi/Lqj5S8DHqbA/maxresdefault.jpg [Accessed 1 Apr. 2016].
49. Arthur Jon Pulos : Courtesy of Prof Sudhakar Nadkarni
50. Sam Pitroda: Telecom. (2016). [online] Sam Pitroda. Available at: http://www.sampitroda.com/telecom/ [Accessed 1 Apr. 2016].
51. IDC Family: Courtesy of Prof Sudhakar Nadkarni