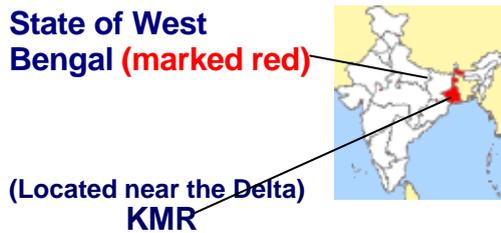


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**THE PULSAR EFFECT**  
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**Pattern-evaluation of the compatibility of Global Pulses and Traditional Local Ecology**  
**Fresh Options for Planning Mode and Processes in Developing Countries**  
**A case study of Kolkata (Calcutta) Metropolitan Region, India**

**Introduction (or short outline):**

The paper is a pattern-evaluation of the metropolitan region of Kolkata to innovate fresh options of planning mode and processes balancing new economic pulses and traditional ecology. The evaluation will likely provide a framework to trace pulses between the poles of global thrusts for economic modernization and conformities towards traditional ecology in a society with older cultural and spiritual footings.

**THE MAIN PAPER:**

The paper has been presented in three parts. The first part is a theoretical review of the theme. The second part reveals the case study in light of the degree of compatibility.

The third part outlines conclusive directions to review the theme in similar situations around the world.

**The Theoretical review**

Apart from the physical aspect, there are essentially two other causal dimensions which have contributed to the development of settlements - one, socio-cultural and two, socio-economic. The various factors like the physiographic region; its history, climate and resources possibly shape the socio-cultural component. On the other hand, the socio-economic component has not only been influenced by these factors, but also by the information and knowledge base of the settlement population and the extents of interactions with other regions<sup>1</sup>. The settlement patterns have changed with the changes in these two factors. The adjustments required or the adaptability to the changes in the settlement patterns has not always been smooth. These **jerks or pulses** have led to temporary chaos or disorders, which are smoothened, with time and change and consequently, the order restored. Order does not solely refer to planned and stable settlements, nor does disorder refers to transitional and non-planned settlements. In location-specificity, at times, a kind of *laissez faire* can also be reversibly called orders<sup>2</sup>.

In some settlements, this lag has been more than the others. In

<sup>1</sup> Based on 'Ekistics': Doxiadis, C.A. (1969)

<sup>2</sup> Based on: "The Third Culture" (chapter 20). Chambers, Robert: Rural development: Putting the Last First (Long man, Scientific & Technical, 1983)

situations where the lag is more, order is more of a result of a balance between planning and *laissez faire*, than straightforward planning. This newly recognized solidarity is based on a notion of right livelihood - in which the aim is to achieve a maximum of human well being in conjunction with an optimum or balanced socio-economic pattern of material production<sup>3</sup>. This is a new level of wisdom<sup>4</sup>, which needs both of:

- 1) Stability and change (pulses)
- 2) Order and freedom (pulses)
- 3) Tradition and innovation (pulses)
- 4) Planning and laissez faire (pulses)

This wisdom leads to our choice from a three-point scale<sup>5</sup> of alternative planning modes. One, it is a system maintaining mode (minimum change approach avoiding any pulse). Two, it is an evolutionary mode (a step-by-step incremental approach). And third, there is the revolutionary mode where the purpose is to transform a social system by redefinition of

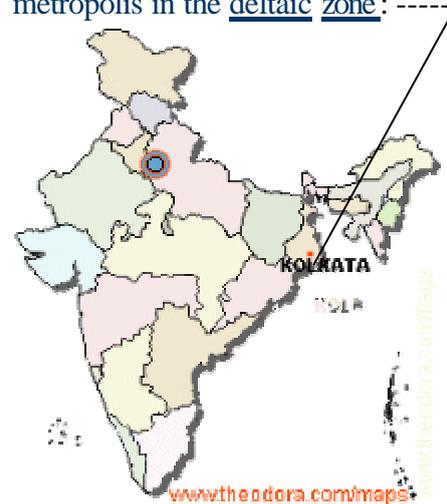
fundamental values (the pulse-itself<sup>6</sup>).

The wisdom also monitors the planning process where a balance has to be restored between the highly intuitive 'Delphi' approach<sup>7</sup> vis-à-vis the highly systematized, mathematical methods of multi-criteria 'decision-theory'.

### The case study of the Kolkata Metropolitan region (KMR): degree of compatibility?

#### An Overview of the Region

The KMR has grown as a major metropolis in the deltaic zone:



<sup>3</sup> The new concept of Ecological Economics is in contrast to mainstream Positive Economics (based on pure analytical decision-making theories) (Costanza, Robert and Segura, Olman and Alier, J.M: Envisioning and Implementation of a Sustainable Society (published in *Getting Down to Earth*, Washington DC: Island Press (1996) and section 1.7: Dorf, Richard C: Technology, Humans and Society: Towards a Sustainable World (Academic Press, 2001).

<sup>4</sup> Pg 46 and 55ff: Schumacher, E.F. 1975. *Small is Beautiful*. New York: Harper & Row. (London: Blond and Briggs, 1973)

<sup>5</sup> Pg 21: Chapter 1: The Planning Process: Bracken, Ian. *Urban Planning Methods: Research and Policy Analysis*. (Methuen, London and New York, 1981)

<sup>6</sup> Pg 7: *On Ethics and Economics*: Sen, Amartya (Oxford, India (1998)

<sup>7</sup> This is the idea of inviting scenarios, in the form of intuitive and 'heuristic' statements, which enable the planning analyst to obtain imaginative insights into **pulsar contexts and their problems** with a vision of the future decision-making and synchronize pure subjective mode and psychological problems of decision-making. The idea originated in Greece from the oracular traditions of Greece at Delphi (The Omphalos of Apollo as the hub of intuitive forecasting) (Kahn, H. And Weiner, A.J. The Year 2000: a Framework of Speculation on the next thirty years (New York, Macmillan, 1967) and The Penguin Dictionary of Symbols by Jean Chevalier and Alain Gheerbrant (1969)

The history of major pulses has been reviewed in three time periods, viz.

**A. Pre-colonial Calcutta (prior to year 1757)**

**B. Colonial Calcutta (1757 to 1947)**

**C. Post-Colonial Calcutta – evolution of metropolitan region (after 1947)**

### **Pulses of changes in Physical and Political Patterns in the three eras**

**A. Pre-colonial era:** Beginning from tropical ecologically sensitive mangrove deltaic forest and interspersed vernacular village settlements (mainly comprised of fishermen and cultivators), till 1690, no one had imagined the pulsation of a future-exploding metropolis.

**B. Colonial era:** It is said that the colonial city emerged by chance<sup>8</sup> with the:

- Establishment of Headquarters of British East India Company (1757) and later the British Dominion in India,
- Declaration as capital city of Colonial India in 1916, and
- However, it suffered major political loses after the seat of power was transferred to Delhi with loss of wider national and global trade/economic linkages.

**C. Post-colonial era:** The city had so far faced three major Pulses:

- First, severe in-migration refugees from Pakistan in 1947 leading to population

explosion and its impact on limited resources,

- Second, similar in-migration due to political disturbances (Bangladesh War, 1970) and,
- Recently, current revivals to renew trade linkages to Southeast Asia (particularly).

### **Socio-economic Patterns of Pulses in three eras**

**A. Pre-colonial era:** Ancient Vernacular trade linkages<sup>9</sup> to Persia and China during Mughal period when the metropolis was almost non-existent in the south (delta).

**B. Colonial era:** Industrialization had begun parallel to the cities in the United Kingdom. Due to the colonial context, adjustments between the pulses of colonial-industrialization vis-à-vis the vernacular settings were contrasting and alarming<sup>10</sup>. There had been downside (poor housing and infrastructure standards) for the native population.

**C. Post-colonial era:** During this era the vitality of the metropolitan pulse diminished with:

- Industrial and Infrastructure degradation, obsolescence of Kolkata port (maritime) facilities,
- Inadequacy of housing and social infrastructure to many incoming job-seekers/settlers

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<sup>8</sup> Termed as 'Chance Erected and Chance Directed' by explorer-writer Sir Rudyard Kipling on the History of Kolkata (vide *Introduction*, CEMSAP Situation Report (1996), joint ODA (Govt. of UK)-KMDA (Kolkata Metropolitan Development Authority) project.

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<sup>9</sup> From Murshidabad /Satgaon (Mid-Bengal)

<sup>10</sup> On this Nirmal Bose writes: 'Kolkata has become a metropolis without the industrial capacity of a London or Chicago, Kolkata cannot generate the jobs and wealth necessary to take care of its population...more than half (then three-fourth) live in overcrowded tenements and bungalow quarters (slums as illegal or informal squatter settlements)' (Calcutta: A Premature Metropolis" (pg 251ff, Freeman: San Francisco).

from neighboring states of India and Bangladesh.

- However, recent attempts to revive the metropolitan pulse<sup>11</sup> are emerging like:
  1. Micro-enterprise and small-scale employment opportunities (ME/SSEP)<sup>12</sup>,
  2. Housing and Industrial development (initiatives) by HUDCO/HIDCO<sup>13</sup>,
  3. Free Trade<sup>14</sup> and new light industrial zone (in I.T. and micro-electronics).

### **Socio-cultural Patterns of Pulses**

Contrary to the socio-economic aspect, the socio-cultural aspect had continued to earmark the metropolis as the cultural capital and people's city of India<sup>15</sup> promoting tourism.

**A. Pre-colonial era:** There were flourishing Indo-Persian expertise in weaving industry, music and art forms to found synergetic pulses for new schools.

**B. Colonial era:** With British advent, the city had become a hub of Anglo-Indian culture. However, the city resurged its ancient festivities like:

- The Autumnal Festivals of the Mother Goddess<sup>16</sup> and,
- The Festival of Winter Solstice in the Gangetic Delta (*Samkranti*) and the Festival

of spring (*Gajan*<sup>17</sup>) and autumn.

**C. Post-colonial era:** Despite urban and ecological pathologies, the city continued to produce rich cultural events and allied personalities<sup>18</sup>.

### **Future of the Metropolis and Alternate Planning Modes – Lessons for the Future**

Calcutta (now Kolkata) was once the economic capital of Colonial India. Today it is no more. From a few scattered hamlets near the Delta, it exploded to the earliest pulsating metropolitan conurbation in India with current 16 million people spreading over 1600 sq.km. However, with the shift of power to New Delhi and subsequent political-economic gloom, the city came down economically. But the cultural side had continued to survive. For Kolkata, trapped between the poles of modernization and traditional ecology, the vision of sustainability remains a paradox. The debate is whether the 16 million people of the metropolitan region are still obsessed with 'cultural continuity' or are they open to fresh mega economic pulses from trade boom in the South-east of Asia? To best understand, the planning mind needs an ancient 'Delphi' like insight into the true psyche of the 'the city of Joy', and understand the depths of her heart - which is the very pulse itself.

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<sup>11</sup> Refer <http://www.cmdaonline.com/>

<sup>12</sup> Kolkata Metropolitan Dev. Authority.

<sup>13</sup> Housing & UD/Industrial Dev. Corporation

<sup>14</sup> Falta Export Processing Zone (FEPZ) near Delta.

<sup>15</sup> The details are available in the '**The City of Joy**' by Lapiers, Dominique and Collins, L.

<sup>16</sup> Fests of Goddesses **Durga and Kali** like the Ancient Greek festivals of Chthonian Demeter (The Corn Goddess) or Persephone.

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<sup>17</sup> They represent ancient seasonal festivals of resurrection of corn-spirit in Anatolia/Greece.

<sup>18</sup> Some are Nobel Laureate Poet Rabindranath Tagore and Economist Amartya Sen, Musician RaviShankar, Scientist S.N. Bose (Bose-Einstein Condensate), Humanist Mother Theresa and Reformers Swami Vivekananda and Shri Aurobindo are to name a few.