

(5)

The Role of Power Dynamics in the Socioeconomic and Physical Transformation of Urban Systems*

Anis-ur-Rahmaan,
School of Environmental Design
King Abdulaziz University, P.O. Box 9027
Jeddah, Saudi Arabia

Abstract

The main thrust of this paper is conceptual and its theme has been progressed in three parts. Part one, attempts to identify the salient determinants of transformation of urban systems. Part two, highlights the dynamic role played by the power potentials and their exchange relationships in bringing about the transformation of urban systems through the process of integration and disintegration of urban cores and peripheries. Part three, goes into an in-depth analytical synthesis of various power systems with the parametric and causal variables of urban transformation. The study has an applied utility, as it not only provides an explanation for the role of power dynamics in the transformation of urban systems in the world at large, but it also provides a framework for carrying out an in-depth analysis of the socioeconomic, technologic and strategic causes of urban transformation in the context of various power systems.

Keywords: Power dynamics; Power potentials; Urban systems; Urban transformation.

* This is a revised version of the paper presented in the 14th Conference of the International Association for People-Environment Studies (IAPS 14) on "Evolving Environmental Ideals: Changing Ways of Life, Values and Design Practices" held in Stockholm from July 30 - August 3, 1996.

Introduction

Urbanization is a worldwide phenomenon; it is largely irreversible ⁽¹⁾ and follows a rising S-curve ⁽²⁾. Based on this premise, which is amply borne out by the relevant literature, this paper conceives the entire globe as being comprised of a hierarchy of local, regional, national and international urban systems which are integrally coupled with their respective thresholds. The physical forms and the spatial extent of these urban systems are getting differentially transformed and could be characterized in terms of their levels and rates of urbanization which are at great variance and changing differentially in various countries. The study carried out by the Jacobson and Prakash ⁽³⁾ indicates that the physical development is “nodal” in the agricultural (pre-industrial) societies due to low level of urbanization (<20%), becomes “aggregative” during the industrial phase with the increase in the urbanization level (20% - 60%), and eventually changes to “diffusive” during the tertiary (post-industrial) civilization due to high level of urbanization (>60%).

Viewed in this context, the urban systems in societies with low level of urbanization would be sporadic in nature, comprising urban nodes and the surrounding agricultural or rural thresholds; whereas, the urban systems in industrial societies would become aggregative and could be described as urban cores surrounded by suburbs, exurbs, and the agricultural peripheries. The urban systems in the tertiary civilization, however, tend to be different from those of the agricultural and industrial societies. They are diffusive and multi-nodal with intervening suburbs. As the various social systems of the world continue to advance towards the tertiary civilization of the Twenty First century, their urban systems will progressively get transformed at differential rates from nodal systems to metropolitan, megapolitan, gigapolitan and ecumenopolitan⁽⁴⁾ system(s). It may be pointed out that in this study the terms ‘urban systems’ and ‘urban cores and peripheries’ have been used interchangeably as both describe the same phenomenon, although the latter does it more explicitly than the former. As the

human society continues to traverse towards total urbanization the urban cores and peripheries will get integrated with each other more and more diffusively.

Although the main emphasis of the paper is on the role of the power dynamics in the transformation of urban systems, it may be worthwhile to briefly describe the salient determinants of transformation of urban systems.

The Determinants of Transformation of Urban Systems

The transformation of urban systems appears to be a function of four determinants, viz., (i) The power potentials and their exchange relations, (ii) Socio-cultural and religious movements, (iii) International and inter-regional transmission of economic growth, and (iv) Development and diffusion of technological innovations. Fig. 1 shows that the prismatic framework is best suited for the integrative interactions of the four determinants because each of these determinants interact directly with the other three.

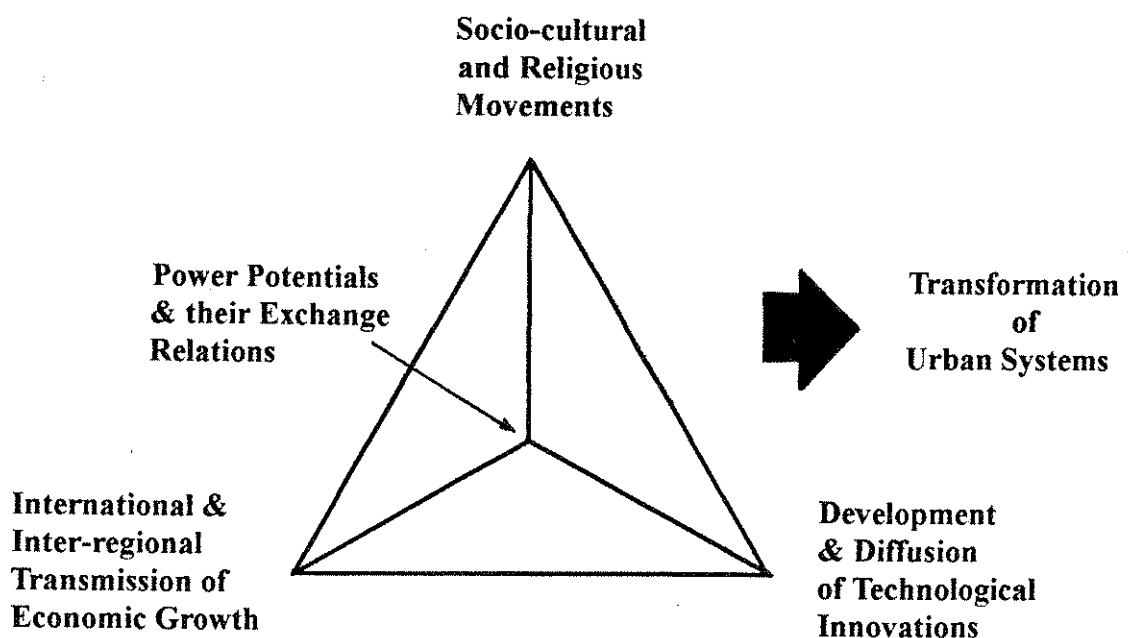


Figure 1. Determinants of Urban Transformation.

Historically, the transformation of urban systems got initiated due to the shifts in power potential and its exchange relations either through the process of "revolution" or "evolution". The revolutionary transformations came about as a result of invasions and colonization of the foreign territories; or even by imposing "top down" development strategies by the military dictators or monarchs. Whereas, the evolutionary transformations get initiated due to the involvement of grass-root level or adoption of "bottom-up" strategies by the political system. Transformations of urban system can also be invoked by creating coercive pressures or even waging wars in the name of socio-cultural and religious movements; or by effectuating international or interregional transmission of economic growth by subscribing to either efficiency or equity measures. Lately, the urban cores and peripheries are also getting drastically transformed due to the diffusion of technological innovations, particularly due to space, transportation and communication technologies. Two phenomena, which are concomitant with the advancement of technology, are the structural changes in the employment pattern and the rise in the level of urbanization in the human ecosystem. Due to the structural changes in employment, the human society embarks on its transitional journey from traditional (agriculture based) civilization to secondary (industrial based) civilization; and from secondary to the tertiary (service based) civilization ⁽⁵⁾. The structural changes in employment, result in the rise of urbanization level which, in turn, leads to the changes in the physical development pattern of the urban systems as pointed out in the previous section.

Due to the rapid changes in the four determinants, the transformation of urban systems has been picking up speed with the passage of time. In addition, the changes in all the four determinants are getting internationalized and regionalized due to the advancements in communication technologies. Also the transportation technologies have eroded away the friction of distance; as a result, the size of the globe has shrunk drastically. People have started

to measure distance in terms of travel time rather than kilometers and miles. Viewed in the temporal perspective, local wars seem to be getting replaced by the regional and world wars which point to the fact that groups of countries are getting aggregated into blocks of regional communities, such as the European Community which apart from having a common defense, is also planning to have a common currency; and wherein, people can travel freely without any visa requirements, and work anywhere without any work permit. Same is happening in the GCC countries which have opened up their borders for each other. All of these changes are leading to the transformation of urban systems faster than expected. Who could have imagined that the Berlin Wall which came into being in early 1960s, would be torn down so fast due to the collapse of USSR in 1990!

Although the three determinants which form the base of the prism in Fig. 1 are important in their own rights and interact both severally as well as jointly at differential rates, yet the fourth determinant, viz., power potentials and their Exchange Relations, which is represented by the apex of the prism is of pivotal importance as it regulates the three basic determinants in bringing about urban transformation. Therefore, the following sections attempt to focus on the role of power dynamics in the transformation of urban systems and its consequential socioeconomic and physical implications.

The Role of Power Dynamics in the Integration of Urban Systems (Friedmann's Model)

Friedmann, in his seminal study ⁽⁶⁾ has provided an excellent explanation of the role which power plays in integrating the systems of urban cores and peripheries, both in the national as well as international context. He has rightly pointed out that ⁽⁷⁾:

"Students of urbanization have tended to explore economic explanations, such as distribution of natural resources, the location of transport routes, the organization of markets, and economies

of scale and agglomeration. With rare exceptions, they have neglected political explanations and, more specifically, explanations given in terms of the spatial distribution of power”.

According to Friedmann, power refers to a stock of resources rather than to a flow of these resources in use. It will consequently be distributed either *symmetrically* (referring to the capacities of actors that are roughly equal with respect to a common decision area) or *asymmetrically*. The use of power, on the other hand, involves exchange relations or transactions which may be either *reciprocal* (regarded as bringing roughly equal benefits to the actors involved) or *non-reciprocal*. Friedmann has constructed a 2 x 2 matrix of power and exchange relations in urban systems (Fig. 2). According to this matrix, urban systems in quadrants 1 and 2 are integrated on the basis of rough equivalence of power, and in quadrants 3 and 4, they are integrated on a basis of inequality or dependence with respect to the urban system in quadrant 1. Friedmann has clarified these relationships with the help of simple analogies as described in the ensuing paragraphs.

In quadrant 1 (symmetry cum reciprocity), relations are those between friends: neither

Power Relations	Exchange Relations	
	Reciprocal	Non-Reciprocal
Symmetrical	1 fully integrated urban systems: moral authority predominates	2 competitive urban system inte- grated on a basis of limited liability: utilitarian power pre- dominates
Asymmetrical	3 active periphery of urban system integrated on a basis of protective dependency: utilitarian power pre- dominates	4 passive periphery of urban sys- tem integrated on a basis of submission dependency: coer- cive power predominates

Source: John Friedmann, *Spatial Organization of Power in Urban Systems*, op. cit., p.268.

Figure 2: A Model of Power and Exchange Relations in Urban Systems.

dominates the other, and the exchange between them will be in balance. Moreover, the rules governing their conduct with respect to each other are accepted morally right: the cost and benefits of transactions between them are not closely calculated. This relationship is typical of actors within core regions comprising one or several rapidly growing cities that display strong and complexly interwoven patterns of transactions. Where several cities are so related, the statistical form of the urban system will tend to be lognormal.

In quadrant 2 (symmetry cum non-reciprocity), relations are as those between the owners of competing firms: each transaction is separately negotiated in the hope of striking a bargain, so that commitments made in one period are not necessarily binding on decisions in subsequent periods. The ultimate intention of each actor is to gain superiority over his competitor. This would be the case of a loose federation of states each having its own integrated urban system as was the case in Yugoslavia.

In quadrant 3 (asymmetry cum reciprocity), relations are as those between superiors and subordinates in bureaucratic organizations: each stands in need of the other, but for quite different reasons. The former require subordinates to accomplish their intentions, but also to rise in general esteem and power, while the latter need the protective benevolence of their superiors and the guarantee of a job. This is the situation typical of many border provinces, such as Magallanes and Tarapaca in Chile which use their exposed position vis-a-vis Argentina, on the one hand, and Peru and Bolivia, on the other (threatening to shift from 3 to 2), in bargaining for increased autonomy and economic benefits. The relations of the Commonwealth of Puerto Rico to the United States is a similar instance; here the threat of national independence serves to strengthen the bargaining position of the Commonwealth. Active peripheries are typically striving to build up one or more growth centers as core regions

subordinate to the urban system in quadrant 1. They do so in the hope - however much in the future - of ultimately being absorbed into the fully integrated core region itself.

Finally, in quadrant 4 (asymmetry cum non-reciprocity), relations are as those between master and slave: the master dominates his slave who, at least outwardly, gives evidence of properly submissive behavior but whose labors on behalf of his master are poorly rewarded. Occasional rebellion on the slave's part may invoke the full repressive power of the master. This is the case of economically backward regions under a regime of internal colonization, such as Bangladesh before independence, which have few cities, and whose domination by the core region in quadrant 1 gives rise to an urban system having pronounced primary characteristics. The latent capacity for rebellion by the passive periphery may induce the dominant interests in quadrant 1 to invest heavily in the region and so to shift it eventually to quadrant 3. Passive peripheries no longer fully dominated by the core in quadrant 1 may eventually come within the area of influence of the competing system in quadrant 2. They have little strength of their own to resist such advances, and their original oppressor may be equally incapacitated.

The Role of Power Dynamics in the Transformation of Urban Systems (A Holistic Paradigm)

Friedmann's model (Fig. 2) is extremely helpful in understanding the dynamics of integration of the systems of urban cores and peripheries. However, the model does not explain the dynamics of disintegration of urban core and peripheries due to power politics, shifting alliances and alienations, particularly, in the so-called Third World countries. The exchange relationships in addition to being either reciprocal or non-reciprocal can also be severed. I have, accordingly, enlarged Friedmann's 2 x 2 matrix of power and exchange relationships in urban systems into 2 x 3 matrix as shown in Fig. 3 cell 3 (symmetry cum severity) accounts for

Figure 3: A Holistic Paradigm¹ of Power Dynamics in the Transformation of Urban Systems.

Power Potential	Exchange Relations		
	Reciprocal	Non-Reciprocal	Severed
Symmetrical	<p>1* fully integrated urban system: moral authority predominates</p> <p>↔</p>	<p>2* competitive urban system integrated on a basis of limited liability: utilitarian power predominates</p> <p>↔</p>	<p>3 urban systems, explained in terms of cells #1 and 2, disintegrated due to conflicting political ideologies: belligerent power predominates</p> <p>↔</p>
Asymmetrical	<p>4* active periphery of urban system integrated on a basis of protective dependency: utilitarian power predominates</p> <p>↔</p>	<p>5* passive periphery of urban system integrated on a basis of submissive dependency: coercive power predominates</p> <p>↔</p>	<p>6 urban peripheries, both active and passive (explained in terms of cells #4 and 5), breaking away from their respective urban systems and moving into the sphere of influence of another urban system: rebellious disposition predominates</p> <p>↔</p>

¹ This 2 x 3 matrix is an enlarged version of John Friedmann's 2 x 2 matrix of power and exchange relations in urban systems in his article "Spatial Organization of Power in Urban Systems" in John Friedmann and William Alonso (eds), *Regional Policy: Readings in Theory and Applications* (Cambridge: The MIT Press, 1975), p. 268.

* Friedmann's 2 x 2 model is comprised of these cells.

the disintegration of urban system due to conflicting political ideologies and belligerent power. The situation will be analogous to a deadlock between two systems with symmetrical power potential such as two competing firms or two power blocks viz., the "Allies" and the USSR during the World War II which eventually led to the division of Germany into East and West, disruption of urban systems of the unified Germany and the erection of Berlin Wall. Likewise, cell 6 (asymmetry cum severity) explains the disassociation of both active and passive peripheries from their respective urban systems and moving into the sphere of influence of another urban system viz., the protectorates such as Taiwan, and Hong Kong before becoming a part of China. This will be analogous to an open rebellion by a slave against his present master, perhaps, under the protective cover of his prospective master. Bidirectional arrows in Fig. 3 account for the reversals due to shifting political alliances.

Before I attempt to operationalize the enlarged version of Friedmann's model, let me digress from the main topic and try to explain the disintegration of one set of urban system and the emergence of the other, with the help of an analogy. Let us suppose that a head of an extended household has to leave the household along with some members closely associated with him for good due to severe domestic rifts. The stability of the household gets disrupted and it faces a threat of disintegration. The situation is eventually brought under control and the transformation gets stabilized by two action oriented processes, viz., the next senior member of the household, even though inexperienced and not competent enough, rises to the occasion and shoulders the responsibility of the household; and the outgoing head of the household, with proven capabilities and experience, struggles hard to get adjusted elsewhere and in the process recreates his own household.

The disintegration of an urban system is quite similar to the disintegration of a household. For instance in 1947 due to the creation of Pakistan, the province of Bengal was partitioned

into the West Bengal (which became a province of India) and East Bengal which was formally designated as East Pakistan. Calcutta, undoubtedly, the only primate city of Bengal, was located in the Indian part of the Bengal. The areas which constituted East Pakistan, merely served as hinterland of Calcutta. Jute and Jute industry offer a glaring example. Before partition, the territories comprising the East Pakistan (now Bangladesh) produced 80% of the total Jute crop and had a virtual monopoly in finer varieties of the fiber. Of the total Jute produced, 95% was exported. Despite the fact that the jute was occupying such a unique position in the economy of the region, East Pakistan did not have a single jute mill, although 108⁽⁸⁾ jute mills were functioning in Calcutta and its environs. The explanation is simple. Jute mills were established on the basis of absolute advantage⁽⁹⁾. Other than raw material Calcutta has an edge over every things: it had highly developed economies of scale and external complementarities; better market mechanism and credit facilities; an efficient transport system; a huge reservoir of highly trained technical and managerial personnel. As a consequence of the partition of India, the hinterland of Calcutta got disintegrated leading to the emergence of a renewed urban system in East Pakistan and a readjusted threshold for the Calcutta Metropolitan area. Dacca, just a provincial town in those days, became the capital of East Pakistan overnight; and along with the other towns in East Pakistan, started industrializing very fast on the basis of comparative advantage⁽¹⁰⁾. According to an estimate, during the period of 1952 to 1970, about 22,000 jute looms had been established in East Pakistan, in addition to the paper, hardboard, and sugar factories; fertilizer, chemical, and pharmaceutical plants; and still others such as ship building, and petrochemicals units were in the pipeline in 1970⁽¹¹⁾.

Let me now attempt to apply the enlarged version of Friedmann's model (Fig. 3) in case of Bangladesh. I do not subscribe to Friedmann's opinion that the power and exchange

relations which led to the creation of Bangladesh can be explained in terms of fourth quadrant (asymmetry cum non-reciprocity) of his model (Fig. 2); and that the dismemberment of Pakistan came about as a result of internal colonization of East Pakistan. If at all, any region in Pakistan was under the grip of internal subordination, it could either be Baluchistan or the Northwest Frontier region in the province of West Pakistan during the period 1955-70. Let me elaborate my contention. In 1955, the four provinces (Punjab, Sindh, Baluchistan and Northwest Frontier) of West Pakistan were merged into "One Unit" and West Pakistan was given the status of a province. The reasons advanced for this merger were to: (I) avoid the quadruplication of public expenditure on governance and administration of four provinces, (ii) reduce provincialism in West Pakistan and, still another not explicitly stated reason, was perhaps to (iii) counterbalance the political power of East Pakistan.

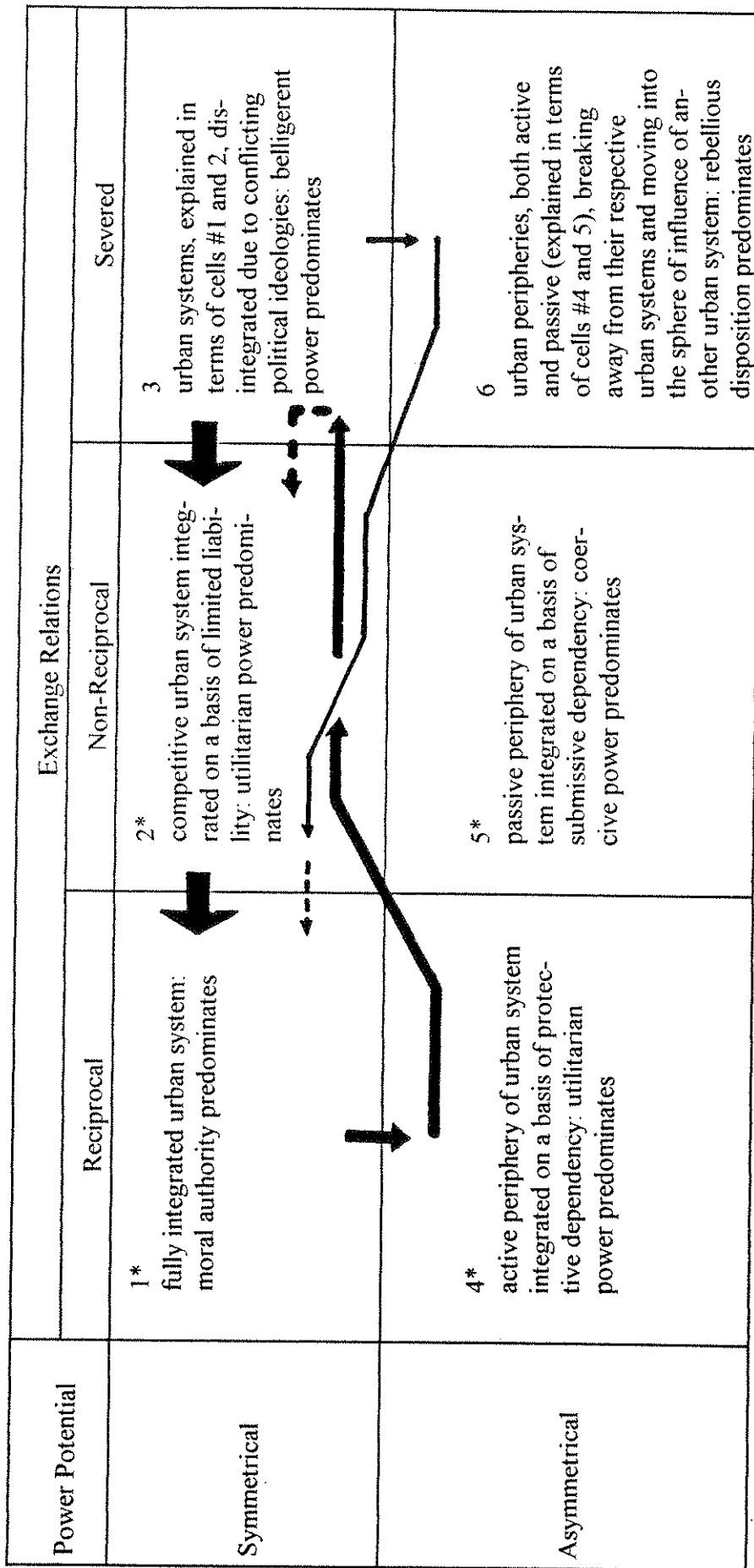
As a consequence, the Provincial Headquarters, Boards of Revenue, High Courts of the four provinces were shifted to Lahore which became the capital of the Province of West Pakistan. Consequently, Lahore started developing at a much faster rate at the cost of Peshawar and Quetta, the capitals of the former provinces of NWFP and Baluchistan, respectively. By late 60s the political leaders of Baluchistan and Northwest Frontier Province started protesting against the dominance of Lahore and their peripheral position. The situation was becoming analogous to that of cell 4 (asymmetry cum reciprocity) and the urban systems of Baluchistan and North Western Frontier Province were being forced to get integrated with the urban system of Punjab on the basis of protective dependency. As a result of political pressure, the Province of West Pakistan had to be dismembered again in 1970 and the status of former provinces was restored again, represented by cell 2 wherein the urban systems compete with each other and get integrated on the basis of limited liability, and utilitarian power predominates. Dominance of the well developed urban system of Punjab over

Baluchistan, with primacy characteristics, to my mind, represents a case of internal dominance rather than internal colonization as the relationship between them was decidedly "asymmetrical cum reciprocal" and not "asymmetrical cum non-reciprocal".

The power potential and exchange relations of former East Pakistan (now Bangladesh) and West Pakistan are shown by the thick arrows in Fig. 4. Both, East and West Pakistan, to start with, were in cell 1 (symmetry cum reciprocity); and their relations were as those between brothers. This is borne out by the fact that Bengalis could have demanded an independent country of their own rather than opting for Pakistan at the time of partition of British India in 1947. Also, despite the fact that being in majority (55% of the population of Pakistan), they (Bengalis) did not press for "one man, one vote" principle, and agreed to 50 percent of the seats in the National Assembly. Likewise, West Pakistanis, having a higher per capita income, agreed for a much higher allocation of development funds to East Pakistan in order to alleviate the economic disparity between the two wings of Pakistan. However, after the death of Jinnah (the Founder of Pakistan) and assassination of Liaquat Ali Khan (the first Prime Minister of Pakistan), West Pakistani civil servants started entering the power politics. These people, by the virtue of their training, were bureaucrats and tried to subordinate East Pakistanis. This situation is best represented by cell 4 (asymmetry cum reciprocity). Mujib-ur-Rahman's (the elected leader of the majority party of the East Pakistan) demand for more autonomy and the cessation of Pakistan can be explained in terms of cell 2 (symmetry cum non-reciprocity) and cell 3 (symmetry cum severity), respectively.

The exchange relations between Pakistan and Bangladesh are no longer as bitter as they were at the time of cassation of the former Pakistan in 1971. During the last twenty seven years the relationships between the two countries have become quite friendly. The diplomatic ties have been restored; Islamabad and Dacca have reaffirmed the bonds of friendship ⁽¹²⁾;

Figure 4. Operationalization of the Holistic Paradigm of Power Dynamics in the Transformation of the Urban Systems of East Pakistan/Bangladesh and Germany.



* Friedmann's 2 x 2 model is comprised of these cells (Friedmann, op cit., p. 268)

general trade agreement has been signed ⁽¹³⁾; political and cultural missions are being exchanged; and both the countries have become members of SAARC (South Asian Association for Regional Cooperation). All these events indicate the initiation of exchange relationships between the two countries on the basis of symmetry cum non-reciprocity as indicated by cell 2 in Fig. 4.

Figure 4 also highlights the role power played in the transformation of urban systems of Germany (shown with the thinner lines) as a result of the partition in 1960, and its reunification in 1990. Interestingly enough, as is obvious from the figure, the process of partition and reunification of Germany and Berlin is almost diametrically opposite to that of the creation of Pakistan and cessation of East Pakistan (now Bangladesh). However, before describing the process in the context of paradigm, I would like to revert back to the analogy I used in case of Bangladesh. Let us suppose the head of the extended household, who left about 41 years ago, comes back along with his paraphernalia, economically bankrupt and physically shattered; and wants to join back the household. During his absence, the remaining members of the household have done well and the household is in good shape economically and physically. Although, the head of the household and the members who had accompanied him are rejoicing their return, and boasting about their usefulness and capabilities to make invaluable contributions to their former household, yet most of the members of the household, with few exceptions, are apprehensive, even anguished about their return, and realize that they have to make drastic readjustments to accommodate the returning head of the household and his associates.

Referring back to Fig. 4, cell 3 (symmetry cum severity) indicates the breakup of the Germany into West Germany and East Germany in 1960, representing the disruption of its urban system, due to conflicting political ideologies. As shown in Fig. 4, the transformational

paths traversed by the urban systems of East and West Germany until their reunification have been distinctly different. The urban systems of West Germany successively moved back from cell 3 to cell 2 and from cell 2 to cell 1 because of two main reasons. First was that the various urban systems in West Germany started competing with each other on the basis of relative advantage rather than absolute advantage after the partition of Germany. For instance, Bonn became the Capital of West Germany which otherwise had no chance of becoming the Capital of undivided Germany. Second was that about \$ 12.5 billion were expended in grants and loans under the European Recovery Program⁽¹⁴⁾ (ERP), commonly known as Marshall Plan, for the rehabilitation of the western European nations, including West Germany. As a result, overall industrial production increased 41 % over the pre-war level⁽¹⁵⁾. In comparison, the urban systems of East Germany recovered rather sluggishly under the influence of USSR as indicated by cell 6 (asymmetry cum severity).

The East Germany got reunited with the West Germany on October 3, 1990, because of the collapse of USSR as indicated by cell 2 (symmetry cum non-reciprocity). The advent of unification represents the initiation of a process wherein the urban systems of the two geopolitical units have to compete with each other to get integrated on the basis of limited liability, wherein utilitarian power predominates. It signifies an era of hope and despair. With the reunification of Germany, both Berlin and Bonn started vying to be the German capital⁽¹⁶⁾. A national debate started: Should the Germany's leaders sit in heart of Europe in Bonn, 50 miles from Polish border, or further east in Berlin, nearer the epicenter of the European community? Bonn - quiet, safe and content - lies in the heart of the affluent Rhine - Ruhr region. The Mayor of the Bonn pleaded. "The argument that this great new Germany can not have a small capital is not only false but dangerous; the move will be catastrophic; half the population (of Bonn) will be hit"⁽¹⁷⁾. However, the proponents for Berlin retorted about Bonn:

“Half the size of a Chicago cemetery and twice as dead! ⁽¹⁸⁾” The Mayor of Berlin mounted equally compelling arguments for his city, which has more than 50 museums, about 6,000 restaurants, and an array of sub-cultures, “Berlin is supremely suited to be the seat of the Government in view of its location, history, and its role as a cultural cross-road. Unlike Bonn, Berlin is in the same class as London, Rome, Paris, and Madrid ⁽¹⁹⁾.

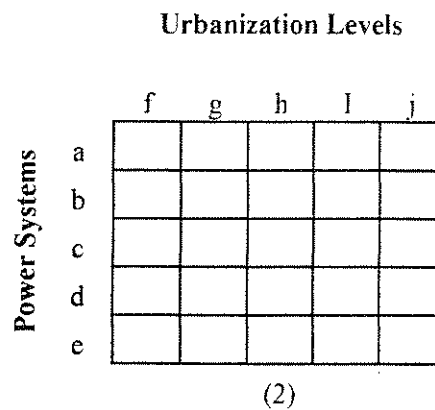
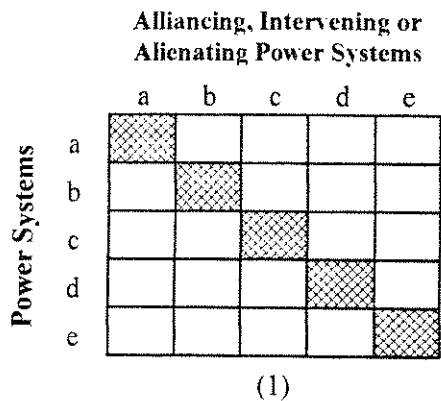
Although as a result of the Parliamentary decision, Berlin became the capital of the united Germany again, the illusion that the city will remain unchanged has been shattered⁽²⁰⁾. Since unification, prices have sky-rocketed and so have the crime rate, traffic density, pollution and every thing that goes with living in a metropolis. For many who lived in the western part of the city before the wall fell, the adjustment of becoming part of 3.4 million population is too much to take. So instead of fighting the system, they are leaving - some to the western Germany and others for the countryside in and around Berlin ⁽²¹⁾. As a consequence of reunification of Germany, the urban systems of both, East and West Germany are undergoing transformation, leading to their growth and decline. For example, Senator Professor Krupp sees the recovery of Hamburg as more than inevitable product of political geography ⁽²²⁾. In the eyes of many, Hamburg has become the boom town of Europe, its heady growth fueled by the fall of the iron curtain and the reunification of Germany, which transformed it from an isolated outpost of the west into a central player ⁽²³⁾. The current state of the merger of the urban systems of the West and East Germany is broadly analogous to the confluence of the two streams with different shades of water. It is expected that for quite some distance the two streams flowing together will continue to be distinguished by the different shades of their water before finally getting assimilated completely with each other. This situation has been indicated by the dashed arrow which indicates that the urban system of East Germany will eventually

make it to cell 1 (symmetry cum reciprocity), signifying fully integrated urban system wherein moral authority will predominate.

Synthesis of Power Systems and the Salient Indicators, Measures, Means and Strategies of Spatial Development.

Even though the holistic paradigm (Fig. 3) does explain the integration and disintegration of urban cores and peripheries due to power potential and its exchange relations, it does not indicate how the urban transformation was brought about; or in other words, the paradigm only highlights the effects rather than the causes or the strategies employed to achieve them. In order to resolve this ambiguity, this section carries out syntheses of various power systems with the (i) alliancing and alienating urban systems, (ii) urbanization levels, (iii) socioeconomic measures, (iv) technological means, and (v) development strategies as shown in Fig. 5. These syntheses are based on the concept that (i) power potentials provide the major impetus for the transformation of urban systems, (ii) urbanization levels impart information about the physical status of the urban systems, and (iii) the remaining three variables mentioned above, and the transformation of urban systems per se, are interlinked by a *cause* and *effect* relationship.

Fig. 5(1) shows the interfacing of various power systems with their alliancing, intervening or alienating power systems. This interfacing leads to a number of typologies of power systems which are of parametric importance. For instance, the case of Bangladesh can be explained in terms of cell "db" of Fig. 5(1), i.e. India's intervention as a result of a secret alliance with Mujib-ur-Rahman who was the undisputed leader of the majority party in East Pakistan. The same cell explains the independence of Lithuanian, Latvian and Estonian Republics from USSR due to the pressure exercised by U.S.A. and its European Allies. The matrix in Fig. 5(2) provides a rather broad classification of urban systems according to their level of urbanization



Legend

Power Systems, their Alliances, Interventions or Alienations

- a: Cooperations for Development; Loose Confederations
- b: Foreign Alliances; Aids; and Invasions
- c: Dictatorship; Monarchy
- d: Democratic System: Grass-Root participation
- e: Democratic System: Centrally Controlled

Urbanization Levels

- f: Less than 20%
- g: 20% - 40%
- h: 40% - 60%
- I: 60% - 80%
- j: More than 80%

Efficiency-Equity Orientations

- k: Predominantly Efficiency Orientation
- l: A 50/50 mix of Efficiency-Equity Orientation
- m: Predominantly Equity Orientation

Development and Diffusion of Technological Innovations

- n: Low Diffusion of Technologic Innovations
- o: Medium Diffusion of Technologic Innovations
- p: High Diffusion of Technologic Innovations

Development Strategies

- q: Predominantly Top-down Development Strategies
- r: A mix of Top-down & Bottom-up Development Strategies
- s: Predominantly Bottom-up Development Strategies

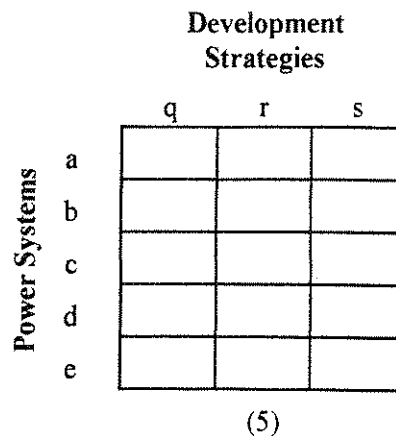
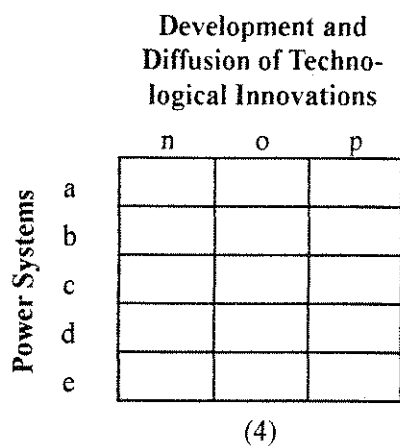
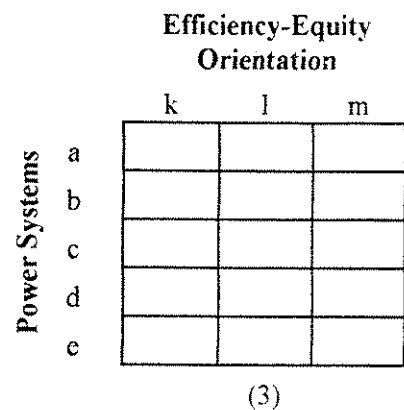


Figure 5: Analytical Synthesis of Power Systems and the Salient Indicators, Measures, Means, and Strategies of Spatial Development.

and the type of the urban system. This classification is of diagnostic importance as it serves as a measure of the politico-physical status of the urban systems before, during and after the transformation, or in other words, the level of urbanization is like a *physiometer* which reveals information about the physical condition and pattern of the urban systems, viz., whether they have nodal, aggregative or diffusive tendencies. The interfacing of urbanization levels with the power system provide an idea about the geopolitical typologies of the urban systems.

Figure 5(3) highlights the role played by various types of power systems in achieving the extent of economic efficiency and social equity in various systems of urban cores and peripheries. The consequences of both the measures are diametrically opposite in the beginning, viz., the efficiency measures tend to optimize GNP and as a result, inter-regional disparities are increased in the beginning of the process; whereas, the equity measures attempt to achieve social welfare at the cost of reduced rate of growth of GNP. The cases of Cuba and Puerto Rico can be cited as examples. They can be represented by the cells "bm" and "bk" respectively. Cuba subscribed to equity measures in alliance with the Soviet Union, whereas Puerto Rico aligned with USA in order to increase its GNP and its resultant benefits for its populace. With the collapse of USSR, however, as remarked by Castenda "Cuba's gain in social equality are succumbing to economic stability, while Puerto Rico thrives as a welfare state."⁽²⁴⁾ It may however, be pointed out that Fig. 5(3) presents an over simplified version of efficiency-equity orientations. In the real world, these orientations are intricately intermixed, get differentiated at various institutional levels and also change with the shifts in the political ideologies.

Figure 5(4) shows the interfacing of power systems and the development and diffusion of technological innovations. The role played by transportation and communications technologies in transforming the urban systems hardly need any emphasis. Although the

development and diffusion of technological innovations appear to be a function of financial and entrepreneurial resources available in an urban system, yet the power systems are imperative in deploying these resources and effectuating their transfer. For instance the reconstruction and transformation of urban cores and peripheries of West Germany was carried out by the USA under Marshall Plan and can be expressed in terms of cells "bo" and "bp" and that of Japan by cell "dp" in Fig. 5(4).

The development strategies used by various power systems can be analyzed and synthesized in the context of Fig. 5(5). For example, the situation of East Germany is approximated by cell "bq", whereas, that of West Germany, perhaps by cells "br" and/or "bs". Likewise, the system prevalent in the Bangladesh may approximately be indicated by cell "dq"; and those of USA and Saudi Arabia may broadly be represented by cells "ds" and "cq" respectively. It may also be pointed out that the various typologies of development strategies are not only a function of the prevalent political system, but also get greatly influenced by the strong leadership qualities of the person steering the system, for example, Stalin of USSR, Fidel Castro of Cuba and Mayor Daley of Chicago.

SUMMARY AND CONCLUSIONS

Whereas the human society, as a result of accelerative pace of technological development and the consequential structural changes in the employment pattern, is advancing towards a global urban society, the literature dealing with the role of power dynamics in the socioeconomic and physical transformation of urban systems is either scanty or not sufficiently futuristic.

The study progressively builds up three inter-related conceptualizations. First, it attempts to identify the salient determinants of urban transformation and emphasizes that the political

power is the prime mover of urban transformation. Second, it modifies Friedmann's model of power and exchange relations in urban systems; and formulates a holistic paradigm of power dynamics in the transformation of urban systems which is based on the concept that the urban transformation involves both the processes of integration as well as disintegration of urban cores and peripheries. Third, it suggests a framework for an in-depth analytical synthesis of various parameters and causal variables of the transforming urban systems.

The study also attempts to operationalize the paradigm to illustrate the transformation of urban systems of East Pakistan due to its cessation and the creation of Bangladesh; and those of Germany as a result of its partition into East and West Germany (after the Second World War) and its reunification in 1990. The operationalization of the paradigm in the two cases leads to an inference that the readjustment of the less developed urban systems of East Germany with the more developed urban systems of West Germany after the integration of the two geopolitical units is more complex and time consuming than that of the urban systems of East Pakistan after its cessation and creation of Bangladesh. This inference is based on the rationale that after the reunification of Germany the urban systems of East Germany have to compete with the urban systems of West Germany on the basis of absolute advantage⁽²⁵⁾. Whereas the urban systems of East Pakistan, after its cessation, transformed on the basis of comparative advantage⁽²⁶⁾.

Finally, the study points out that the paradigm only deals with the effects, brought about by the power dynamics, rather than the causes of the transformation of urban systems; and that, it is imperative to carry out an in-depth analysis of the causes in the context of various power systems. The suggested framework for the analytical syntheses of various causes of urban transformation is comprised of five matrices formed by interfacing various power systems with (i) alliancing, intervening or alienating power systems, (ii) urbanization levels, (iii) efficiency-equity orientations, (iv) development and diffusion of technological innovations, and (v)

Development Strategies. The study contends that all these five matrices are important in their own rights, as matrix (1) describes the various typologies of power potentials; matrix (2) is of diagnostic importance as it indicates the politico-physical status of various urban systems in the temporal context; whereas, the interfacing of various power systems with socioeconomic measures, technological means and development strategies, represented by matrices (3), (4), and (5), highlights the salient causes effectuating the transformation of urban systems. The synthesis is diagnostic as well as prognostic in nature, because it not only provides an explanation for the transformation of urban systems but also provides a basis for anticipating various possibilities for their transformations.

The in-depth analytical syntheses of the two case-studies, Bangladesh and Germany, in the temporal context can only be carried out with the help of actual facts and figures which are beyond the scope of this study. It may however, be pointed out that in the process of carrying out the analytical syntheses of various case studies, it may become necessary to further enlarge or refine the suggested matrices shown in Fig. 5.

Acknowledgment: The author is grateful to Dr. Mushtaq Ali Khan for his editorial comments and help in the preparation of computerized Figures for this study.

NOTES AND REFERENCES

1. United Nations, "Urbanization: Development Policies and Planning" in *International Social Development Review*, No.1. New York: Department of Economic and Social Affairs, The United Nations, 1968.
2. Jakobson, L. & Prakash, V., "Urbanization and Urban Development: Proposals for an Integrated Policy Base" in Jakobson and Prakash (eds.), *Urbanization and National Development* (Beverly Hills: Sage Publications, 1971), p.30-32.
3. Ibid., pp. 26, 29, and 36.

4. Doxiades, C.A., *Ekistics*, New York: Oxford University Press, 1968, pp 215-220, 376-380, 430-431.
5. Fourastie, J., *Le Grand Espoir du XX Siecle*, Edition definitive (Paris: Gallimard, 1963).
6. Friedmann, J., "The Spatial Organization of Power in the Development of Urban Systems" in *Development and Changes*, Vol. 4, no. 3. Pp 12-50; also reprinted in J. Friedmann and W. Allonso (eds.) *Regional Policy: Readings in Theory and Applications*, Cambridge: MIT Press, 1975, Chapter 11.
7. Ibid.
8. Economic Research Bureau SOCOM. *Statistical Abstract of Bangladesh*, Calcutta: Society and Commerce Pub., 1972, p 48.
9. Countries compet  in international markets on the basis of comparative advantage, while regions within a country on the basis of absolute advantage (Albert O. Hirschman, "Interregional and International Transmission of Economic Growth" in John Friedmann and W. Allonso (eds.) *Regional Policy: Readings in Theory and Applications*, Cambridge, MIT Press, 1975, p 152.
10. Ibid
11. Statistical Abstracts, op. cit., pp. 48-64
12. News item: " Islamabad. Dacca Reaffirm Bond of Friendship" (Washington D.C.: *Pakistan Affairs*, Sept. 6,1977, No. 18, p.1.)
13. Bangladesh Times, " Ties with Pakistan" (Reported in the *Asian Student*, Sept., 24, 1977, p. 9.)
14. Marshall plan, also known as European Recovery Plan (ERP, was designed to accomplish the economic rehabilitation of Western Europe after World War II. It was effectuated on April, 3, 1948, when president Harry S. Truman approved Congressional legislation authorizing the appropriation of \$5.3 billion to finance European recovery operations for the first year of the four - year period, covered by the enabling bill. The Western European economics was strengthened immeasurably as a result of ERP (*Funk and Wagnalls New Encychlopedia*. Vol. 9, pp 266.)
15. Ibid.
16. Marshall, T. (Los Angeles Times), "Berlin and Bonn Vying to be German capital", (*Arab News*, Nov. 3, 1993).
17. Ibid.
18. Ibid.
19. News item:"Bonn or Berlin - Which should House Seat of Government?"(*Arab News*, Oct. 8, 1990).
20. Kallenbach, M., "Berlin at wit's end",(*Saudi Gazette*, Oct. 12, 1992).
21. Ibid.

22. Milnar, M. Hamburg. How reunification has helped one great German city".(*Arab News*. March 5, 1993).
23. Ibid
24. Castenda, J.G. A Tale of Two Islands. In *Los Angeles Times, World Report.*, Feb. 25, 1995, p. iv.
25. Hirschman, op. cit.
26. Ibid.