Learning from Traditional Towns
-Spaces and Networks for Sustainable Multi-cultural Urbanism.

Sanskrit terms for architectural cornices of buildings in *Nagara* or towns e.g. *kapota'* (a rolling/overhanging one) and '*kapotapali*' (a cyma-eave type) point to potential end-users, *kapota* meaning pigeon, dove or just any gray urban bird! This objective concern with building detail expressed for the creation of a proper living environment for an apparent peripheral citizen of town, the bird, seems to be more than literally addressed through centuries by architects and evident in substance in the continued 'urban way' of 'urban' birds themselves even now. What is more; this urban way of flocks of birds in traditional towns is seen not just in places such as Patan Durbar Square or a old town of the eastern urbanism but is quite wide spread even in spaces of western towns with medieval bearings. Indeed, impressionist photo-images of towns at rest in central spaces often make a show of flocks of birds in hurried flights or shuffling blurred across camera lens making it as dominant a theme for portraying urban life as other popular theme of solitary figures pensive in thoughts and settled in a bench along a wooded pathway of a park. But these romantic and artistic portrayals should be giving the urban planner some other message – how the image of the town today is being perceived and presented more as an anti-thesis of town, urban life and urbanism. After all, a functioning urban space needs to be seen as successful with and full of community of urban men and great towns

must be places of joyous 'community' life partaken by a variegated society of people with diverse activities and objective patterns of playing out life in sophistication. Today's planning and development pattern of urban centers seem to somehow push urbanism out of its public spaces and even reduced streets into simple tracks for channeling utilities.

Fig. 1: Birds of Patan Durbar – Life style designed to suit the Environment

It is an irony that few modern towns have been appreciated as places for urban living whether from the perspective of planning or design of spaces despite the significant increase in professional knowledge and understanding of urban planning over the past century. This glaringly poor evaluation of urban planning in modern times is in sharp contrast to present man's appreciation of past towns and urban spaces. And this could not just be a simple case of a nostalgic reaction towards past heritage and the far away and consigned into the character folds of 'tourist behavior' or escapist urbanism. Spaces and entities of modern towns need to be as meaningful and sustainable, socially and culturally as much as they need to be efficient and sufficient as a productive conglomerate of economic activities, enterprises, supports and services. The dynamic and continuously varied and varying mode and mix of socio-cultural interaction of a urban society makes physical planning and spatial design inputs of any kind static and socio-cultural sustainability of physical spaces and networks can at best be short-lived. This conflict of character of the urban socio-cultural process and physical planning inputs appears

somewhat more successfully dealt in the past urban development patterns through additional means and caused a greater socio-cultural sustainability of the space and the urban area itself to take effect. One group of such means appears physical provisions that demands and precipitates a dynamic response of participation in adoption and adjustment of life by the changing urban society over time. Observations of the urban object, space and network of the traditional town can be quite illuminating in this regard and are potential approaches to actually plan towns spaces and networks so that 'creative extra provisions and possibilities' may be provided for so that the residents of the town may themselves 'design their life', as it were, to their changing styles and needs and create a dynamic humanist urbanism. As a matter of fact, it is this built in suitability to the future to come that makes a traditional town plan and design sustainable in terms of living a ever-changing urban life. This paper proposes to look at some aspects of public spaces and their spatial networking of traditional towns of Kathmandu Valley with a view to draw lessons for planners and urban developers particularly in building and plan for social and cultural sustainability of towns.

Learning from history and historical situations is not given due space in the modern urban planning curricula and expected learning outcomes are often defined at the level of novel descriptions and exposure of scientific justification. Thus, even though planning as a profession is still young in the modern period and its academic education developing, it seems already time for planners and urbanists to make conscious and specific efforts not to be over-run by the 'terror of modernist moralism' in planning and making cities. One knowledge based approach of rearming planning could be to reconsider 'the how and whys of' planning and design of traditional towns, particularly the way their spaces and network are designed and managed for changing multicultural heterogeneity of urban living, so that towns for our own times will also be able to provide the base for contented urban life now and continue to do in its own un-forecasted future too. Actually, in problem of urban planning in modern times lies more in dealing with the social consequences of the run-away heterogeneity of the contemporary urban society. As a theory, we can state that planning and design approach that incorporates management of dynamic socio-cultural heterogeneity does not have any need for forecasting its future, whether quantitatively or qualitatively at all for planning purpose. Historical experience appear unequivocal that social phenomenon of urban heterogeneity is best to be planned as a 'unexpected quantity'. Indeed creation of homogeneous social and cultural environment for a society, which has heterogeneity as its formative nature, could well form the objective crux for urban planning theory. Managing heterogeneity itself should be able to provide the most sustainable way of developing lasting urban form and spaces with potentials for adjusting to dynamic urbanism of all futures.

Heterogeneity of residents, their thoughts, faiths and activities, their different ways of resting and recreating is the main challenge to the planner and designer of urban space. In such a case, it would not be unnatural that most of us find our towns not proving to be satisfactory for us or we find ourselves not fitting into the space. But it is also as true, if we look into traditional town and its design philosophy/approaches, that heterogeneity and density of these elements and the way they combine and interact with each other for particular social, economic and environmental intents have created for us the variety of urban form itself from one culture to another.

Traditional towns of Kathmandu valley have had their own long history and the more than fifteen centuries long period of sustained development and continuous use itself is proof of its sustainability and built in character that must have offered manageability and adaptability for the dynamic heterogeneity of urban living that the early valley towns went through in their past futures! Indeed, it is this long period of sustained urbanism lived out continuously in the 'same' physical space that make these towns specimen to study to understand the planning characteristics.

The high level of sustainability achieved by the traditional town appears to have been as much a result of some conceptual positions that may have a direct and innate relationship with the overall aspect of heterogeneous social behavior, which essentially is differentiating and divisive in itself. The idea of bounding social behavior in economic orbits through specialization of work and their further bounding in a spatial sense by designating land and spaces in for physical sense appears to have been used in the overall planning of the town itself. The idea of bounding heterogeneity together through some strands of homogenizing parameters and using them to create a unified and cooperative setting for settlement has been applied then to neighborhoods, streets and other component spaces of progressively decreasing heterogeneities. Such intent, detail and character of context can be observed in the planning of neighborhood areas and setting the nature and mix of expected public and private behavior in public spaces – a sort of applied socio-cultural framework or rules of public action that precipitate a behavior pattern and compatible and moderated actions, dealing with heterogeneity through design of network and intersections (public squares) and creating hierarchy of spaces, that may diversify or amalgamate over the future, etc.

The Bounding of inter-dependence of Heterogeneity:

The town, for most cultures, is a bounded area, where passages cross to cause a dynamic convergence … of people, ideas, activities and services. Convergence of heterogeneity of the urban citizen naturally demands understanding, acceptance, cultivation and nurturing
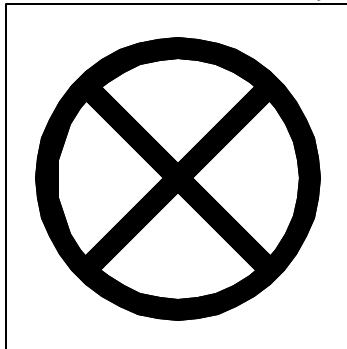
of mutual interdependence and the rules of living together binds them together in some form of a whole entity. The early Egyptian ideographic symbol for the word 'town'– a composition of a circle enclosing a cross- was almost literal. And there is little difference in this perception of urban form between east and west - the Nepali town from the Malla period were not only literally and ritually bounded but were also built physically bounded.

Fig. 2: Town – a bounded settlement at crossroads of people, ideas, activities and services.

It seems it is this bounding (together of people in inter-dependencies and security of cultural framework) that forms the 'problem of planning' of urban settlement as a place of convergence and crossing of passages, of people, of ideas, and of transport, and the likes. It is usual for the modern planner trained in the global/western knowledge base to think of the city as a pattern formed by patches of land uses interlinked by strings and networks of services. The idea of the commercial and business city is so much dominated by the economic concerns that the town has almost become a conglomerate of enterprises, a network of real estates as it were and we tend to forget altogether that the idea behind

networking in the first place was to create of defined forum for living with socio-cultural inter-dependencies demanded by the heterogeneity characteristics of urban population. It is possibly for such economy-dominated approach to development of the contemporary town that socio-cultural function of the town has become a peripheral concern and urban society is so fragmented and torn in conflict – the urban poor being more an example of this social fragmentation than a 'economically' defined quantity or group. Traditional town plans show that bounding together of the urban society is primarily achieved through socio-cultural approaches and environmental and economic homogenizing approaches come to be applied as supplements rather than alternates.
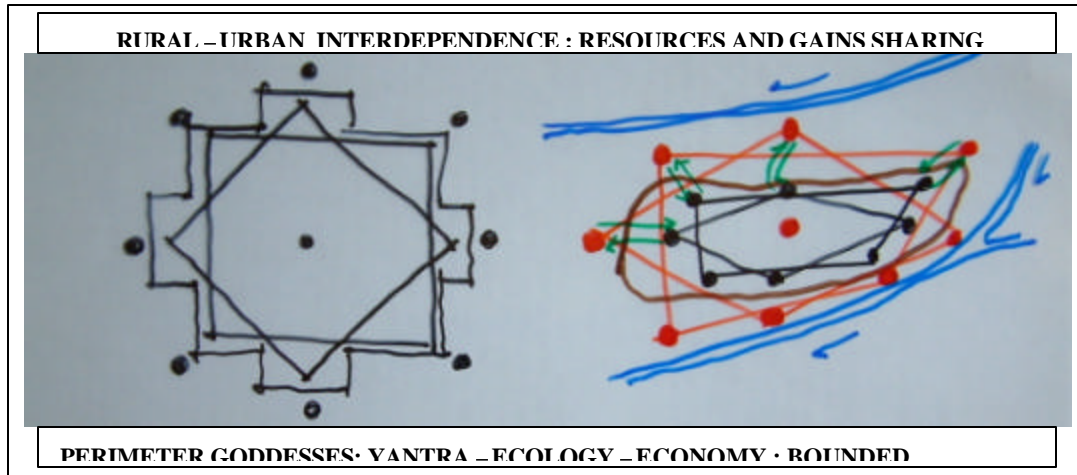

Fig. 3: Yantra of Bhaktapur Town – Culturally bounded Settlement with Interspersed Homogenizing Contexts.

Historical Asian cities, particularly those belonging to the periods dominated by Hindu/Buddhist philosophies, were always conceived as bounded entities because the image of the cosmos after which the cities were patterned had a set of perimeter gods and goddesses, whose location spatially defined a physical boundary. Since it would be taboo for the residents to build outside of it, a town's general tendency to expand and break its boundary was stemmed as its religious bearing acted as a deterrent. It will be observed that siting of the historical towns of Kathmandu was always on less irrigated higher lands, called *tar*. And the perimeter gods, apparently placed to portray the cosmic image and made sacrosanct by virtue of the same, actually are located such as to keep irrigable agricultural outside the settlement limits. The utility of bounding was so clearly mundane that the town, although based on strictly geometrically patterned *mandala* or *yantra*, actually shows a boundary outline that follows contours of the site rather than the geometry of the pattern. It appears that the bounded town concept of ancient Asia, idealized though it may have been as a picture of the cosmos (Fig.3 shows the idealized diagram of Bhaktapur, the capital town of the Malla), helped them avoid its expansion into its hinterland and thence protected its economic base.

The basic principle that a settlement should not expand outwards and engulf its own economic base is as good today as it was then and an appropriately bounded town with a similarly distinct and protected hinterland would go a long way towards sustainability. From an administrative point of view too, bounded areas are more amenable to application of authority and responsibility. It is also as clear that the idea of bounding applied to the urban settlement entity excludes and puts the other entity on the 'outside' –

the hinterland or rural area. Modern understanding of urban sustainability in terms of resources has shown us that the primary condition of urban unsustainability results from overexploitation of resources, exclusive exploitation and consequent deprivation of the rural area and lack of commensurate return of the benefits or other inputs back to the hinterland. The ecological imbalance triggered by the over-exploitation of the '*pine*' by the *'dune'*, the local terms for the outside and the inside, as well as waste, poverty and disparities in sharing of gains of development have often dominated debates on environment and urban development in recent decades.

The urban system can hardly be as closed physically as the idiographic symbol tends to show as it draws much of its material and energy resources from areas beyond its administrative boundaries and at the bottom, it's economy is dependent on the hinterland. Without this base, there can be no city and that a city cannot sustain by itself is axiomatic. The application of the ideology of sustainability in urban context thus should not be construed as urban *self-sustainability*. SUD should aim at distributive justice and access safety in a spatially extended area that includes the hinterland and expects the play of action and results in the urban-rural continuum. Urban sustainability demands direct recognition and nurturing of urban-rural continuum.

Such hinterlands were small and clearly demarked to begin with a certain character of richness in material or opportunity. In course of its history, with successive growth of trading, industrial, commercial, communication and information cities, this hinterland has continuously expanded and become a mass of rarified and diffuse footprints. As cities draw energy and materials from such diffuse rural settings, densify them and consume in a concentrated setting, threshold capacities get exceeded causing unsustainability. If may bring unsustainability in other ways also. From the pattern of historical urban development, it can be observed that the extension of the hinterland is not just a function of nature of the dominant activity in the city, such as trading, industry, commerce, information etc., but also a result of development of transportation and communication systems and technologies that linked it and other systems around. The more diffuse and extended a hinterland becomes, city's sustainability could decline with increased demands for inputs of transport and communications between it and its supporting footprint area.

Similar localized dependencies in historical cities of Nepal appear to have led them to develop interacting activities that not only sought participation of both the dwellers of the city and the hinterland in preserving and maintaining the resource that supported the city but also to continuously remind the city dweller of the dependency and its demands. The use of festivals and ritual mediation of planning and growth of urban centers has made them famed for many festivals that seemingly enact the ritual play of life of gods that are interspersed in the city in the pattern of the cosmos. However, if we look deeper and analyze the component activities, we find that several festivals are played out in annual/seasonal or other cycles, not just inside the town but in a wider region including the town and villages in its hinterland. In the guise of religious activities, these festivals incorporate citizen participated actions more suited at preserving and maintaining the resource and ecology of the region. The festive region shows more as an area with a dispersal of ecological / economic resources rather than a collection of religious spots. These festivals appear designed as a locus of managing and sustaining urban rural dependencies through citizen participation. They are given a garb of religious activity seemingly more to incite the faith of the believers and affect a predetermined pattern of

social behavior than to cause religious merit. In effect, they extended sustainability of the urban system. They also succeeded in keeping up, over several generations, citizen awareness about the ecology, actions of renewal, maintenance and upkeep expected from them and the pattern of share of responsibilities between the citizen, social groups and institutions of both the town and the region. These have greatly helped in maintaining harmony and cooperation between the city and its hinterland region while sustaining urban systems through source protection and conservation.

Homogenous Neighborhoods-Heterogeneous Nation-towns:

Studies of growth of town in early human history shows that as the heterogeneity grew with the in-migration of diverse cultural groups, larger community compartmentalized into smaller ones seeking social association with others as much like themselves thereby offering security and sharing of facilities and environmental amenities – this became the primer to the formation of neighborhood as a spatial sub-division in the town. Overtime, particularly after Medieval period, neighborhoods also exhibit 'negative' grouping characteristics as class and status distinction, prejudice and economic marginalization.

Indeed, the attention of the modern western world was drawn to the problem of a heterogeneous society primarily as the social inequality, intolerance and injustice building up in the American cities along with its economic disparities took a political dimension with the rise of the civil rights movement of Martin Luther King. Essentially, its character in origin was bi-racial (e.g. Black and White) in early American context. The segregation of passengers in public buses or of the children going to school by the color of their skin were the first infamous ways designed to 'culturally' deal with the problem of disharmony in a society with a just a two-way split. The problem of social disharmony, socio-cultural isolation and political non-integration faced in European and American cities and societies of the seventies was 'multicultural' in nature in that the lines were drawn as Indo-Pakistan, Sub-Sahara or Mexican groups. In more recent times, the divide in the richer western societies is again tending to be bi-polar on grounds of religious faiths (e.g. Islamic immigrants). Problems of non-integration of heterogeneous groups in urban societies ultimately take a cultural dimension as the multiplicity of issues mix social, religious and economic dissents and discords although specific predominant dimensions may vary to begin with. The urban poor as a group in town is new as well as age-old at the same time. Whereas sustainability requires building a sense of community with the future generation, with unassimilated heterogeneity and social fragmentation increasing there is actually erosion of community behavior within the present generation most evident in the aspect of spatially characterized neighborliness. Such fragmentation is seen not just between different cultural groups but also within the same groups. It seems in the nature of urban social environment that as options and capacities for individual communication through globalized communication and information network and offer long reaches to form specialized 'virtual communities', it faces a reduced spatially characterized or place specific community behavior and break of bonds even within the mono-cultural group. Unless this loss of community spirit is moderated, urban social environment will remain unsustainable. And, historical urban societies show that they had cultivated a better grip on problems of heterogeneity and achieved greater success in community building than what we have been able to do in our time.

The very understanding of the urban society as living sociably and 'civil' at the meeting ground of cross-roads of different and divergent groups, the town, recognized it as a multi-cultural entity with built-in heterogeneity, as it were. This acceptance of heterogeneity as an innate urban character seems to have led the historical towns (and the planners that were) to develop very many different ways of bringing about full integration or creation of pockets of partial homogeneity that can be as effective models of integrating societies and developing tolerances from cultural to economic perspectives even in contemporary contexts. The neighborhood, whether created around common economic activity, social status or interest or just simply tied around some social facility, was one such idea applied in historical town to create spatial patches of homogeneity.

Heterogeneous societies demand socially understandable and usable homogenizing inputs even just to create an environment of living together as a community and it is virtually impossible to create such understanding and input options for the whole spectrum. Also, when heterogeneity is formed of differing cultural groups, each with its own understanding of a good civic way of living, inputs that can bring homogeneity will demand a time frame of implementation as slow and long as the culture forming process itself, which follows the cycle of experience, moderation and assimilation. Traditional urban cultures appear to have moved in this fashion. Lesser objectives of living together in a civic setting may also be to seek harmony through moderated homogeneity, precipitating public behavior respectful and tolerant of differences or even through partial assimilation of patterns-in-nearness in a multi-cultural mass. We may be just in seeking modest but achievable and manageable level of social and cultural sustainability.

Creating acceptance and tolerance between groups is a natural first step towards addressing the problem of divergence/diversity. The segregation of commuters in different school or public bus seen early in American towns actually was not an exercise in cultural tolerance – it actually caused further cultural estrangement. For the purpose of creating cultural tolerance, the means has to segregate the hotter differences and build tolerance through bringing the groups together in cultural activities with moderate or diffuse differences of perception. Also it is important that socio-cultural tolerance is sought to be built through networks and public spaces of a town together so that harmony in urban life is sought in a multi-pronged in all avenues and squares in concert!

Researchers and experts in cultural responses of multi-cultural societies have shown that gradations of cultural tolerances lie in various shades between segregation and amalgamation and accordingly sketched various possible models for sustainability of cultural diversity within multi-cultural societies. An adaptation in spatial pattern of one such set of assimilation scenarios is shown in Fig. 4 (inspired by Agt and Walker's gradations of cultural tolerances).

A look at the organization and planning of Malla period towns shows that the town was sectored into 24 *tole,* which were socio-economic neighborhoods formed by residents from the same family profession. It seems that the idea of such a planning was to reduce an overall heterogeneity into pockets of homogeneity so that interaction of a community nature could happen in each pocket.

It is interesting to note that Kathmandu valley towns did not divide them into religious neighborhoods and since there was religious mix within neighborhoods, no *tole* used

monuments belonging to either religion as focus, exhibiting conscious effort at religious neutrality. Similar sensitivity towards religion and objective orientation towards community interaction may be seen in the use of wells to supply water within the *tole* and stone water conduits between *tole*.
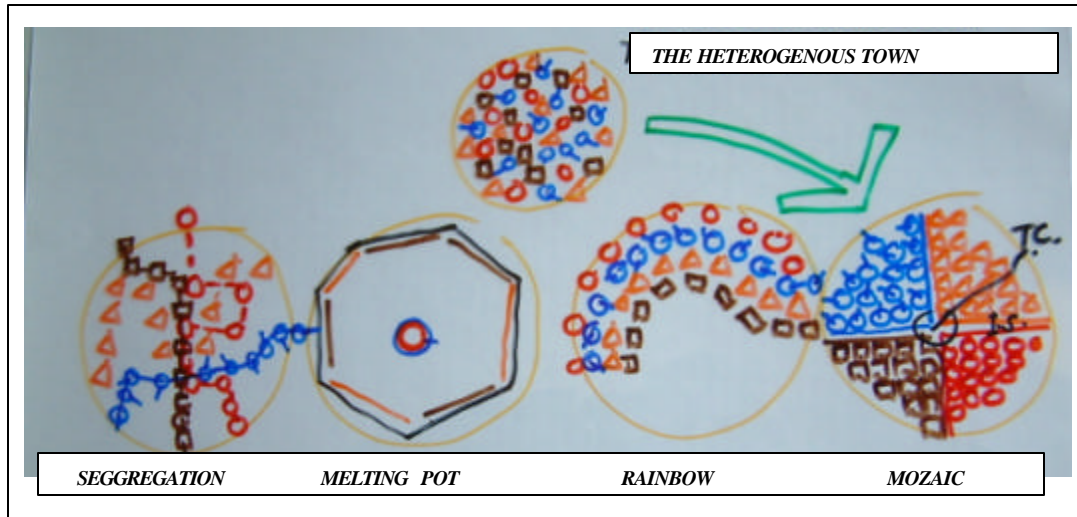

Fig. 4: Creating Social Cohesion in a multicultural Society

Such patterns in historical towns of Kathmandu suggest that through creation of 'mosaic scenario,' it may be possible to sustain a multi-cultural or heterogeneous urban society provided that interactions are sought and provisions for it provided, socially as well as spatially, within as well as between groups through designated spatial elements along networks, crossings and other 'boundary conditions' of the mosaic tiles.

The Public Social Space:

Today's living activities in traditional towns-space show the community of birds to have been more successful in coming to peace in town spaces with the changing times than the human society, which developed it. Huge flocks of pigeons make home under the overhanging roofs of the very many temples at Patan Durbar Square – as a matter of fact, they have made it so nearly a natural habitat that disposal of their droppings from several particular locations and temple parts, have taken the dimension of a recurrent operational problem for the managers of public buildings and spaces there. A closer review will reveal that the birds are making use of all forms and spaces, not just the shaded ledges under the roof or *Kapotapalli* alone. It is as though the users had made a thorough assessment of usefulness and adaptability of the elements of provision and shades of environmental conditions generated by diurnal and seasonal changes of sun, air and rain exposure, for their various needs of living and designed their life to suit the context! Of course, these scenes are discussed here not to argue that social life of birds and complexity of their activities of living in an urban setting have much in common with the human society or that they have faced as fast and drastic a change and solved and saved their urbanism. Rather, the continuing use of urban central spaces of towns by the gray birds and the way they are able to made a joyous living in an align setting can be telling to urban residents that adoption and adjustment of life and living to available spaces and

provisions is as important in creating a continuous meaningful community life as having a well planned or custom designed networks and spaces in the first place.

The study of the social spaces and social hierarchical character of the traditional Malla towns will show them as places demanding a balanced expression and execution of the private and the community directed pattern of behavior in a graded way. If we make a 'privacy and communality' gradient along a line starting from a house within a traditional neighborhood '*tole*' and extending to the city center – we find interesting patterns. Elements that expect an individual citizen to behave in manners of varying communal shades and intensities were interspersed in the town and create a transition and mingling of complexities as one moves along the street from 'home', through the neighborhood to market squares and on to the town/nation center. In the following paragraphs, we explore a few of such elements such as 'Pikhalakhu', 'Dabali', 'sacred pits, power stones or temples' etc. We see such deliberateness in their placement in town space and network that they appear more as planned inputs than output of cultural assimilation process itself.

The Power Stones on the Pathway: Pedestrian Traffic Circle?

Lane separation by mode of transport or speed of vehicle in management of linear movement or traffic roundabouts and lights for ordering managed priority in changing directions of movement of vehicular traffic at crossings and intersections have become almost universal in modern day automobile town. Road and transport services have dominated the urban network so much in the past century that managing and streamlining heterogeneous machines movement has become the key 'harmonizing or homogenizing' action at network level. Such technical and functional standardization has made network in town a simple service artery and planners and citizen alike have forgotten its contextual position in the broad socio-spatial framework of an urban settlement. Indeed, the two major developments in the town of the last century that can be directly associated with the loss of humanness and sociability in urban life are the high-rise multi-floors buildings and the linearly-incremental and horizontally distancing network-services - both technologically determined.

Streetside Houses with Individual Pikhalakhu Stones

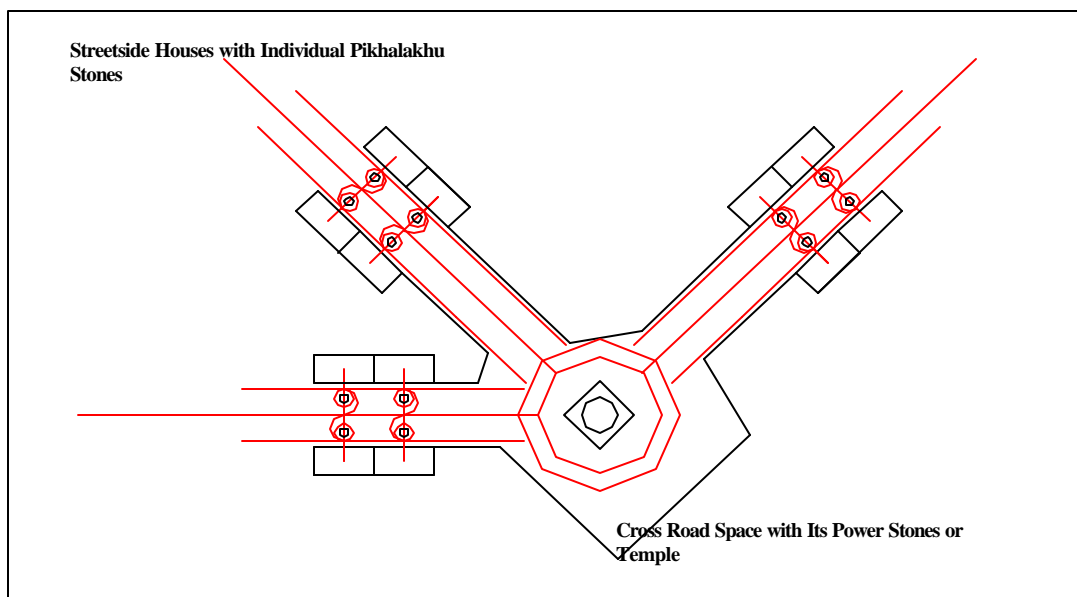**Cross Road Space with Its Power Stones or Temple**

Fig. 5: Streamlining Movement on Streets - Pikhalakhu and Power-stones on Cross-roads

Observation of historical towns and their network 'spaces' reveals urban heterogeneity is better managed in the realm of pedestrian movement and on a grounded natural plane. It is important to see that towns in all civilizations other than the present one were 'pedestrian' in extent and nature of network space and the scale was determined with three-four-floors buildings and these are not chance happenings. Philosophically too, we need to view the street as a stream of divergent thoughts (rather than as stream of machines with divergent speeds and characters) and spaces as intersections of these thoughts and these are the roots of cultural divergence and expression of heterogeneous social behavior.

If we take the individual residence of a citizen as the basic homogeneous unit, the first interface point between two or more of these units could be the base space for expression of heterogeneity; indeed, we find traditional towns of Kathmandu placing elements to create context of harmonizing in as immediate a location as the intersection of the line of exit from the front door of the house and the street it sits besides. The *'Pikhalakhu'* stone that marks the exit of individual houses also seems to tone up the individual behavior to a community compatible mode – in a way the ingestion of heterogeneity by the homogeneous units begins at the door steps on the first street. The old core of Kathmandu is characterized by the squares at its very many path-crossings as much as by the streets. This crossings and the way the elements of public behavioral guidance are disposed there in make the chowk with its invariable assortment of venerated stones and images seem like Malla pedestrian equivalent of single level traffic round about with its universal three color lights guiding the rational vehicle driver in modern day street crossing. All these sacred stones, whether in front of the main door of a house and sitting in a street intersection (Fig. 5), all induce a clockwise 'circumambulatory' movement of the pedestrian at each point along the path, where a change of direction of movement is to take place. And much like the roundabout moderating the many steering wheels crossing at the same junction, the series of points demanding circumambulatory movements strung along pathways created several roundabouts for thoughts or zones of neutral thoughts on the stream of thoughts. The street as much as its crossings had become a string of spaces for moderating thoughts going in divergent directions – the neutral directionality of a circular movement seems to have been compounded with a pause to provide for a possibility of creative harmony between the divergent ideas.