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Domain Analysis of ‘Urban’ in Library Classification Schemes

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Abstract

Urban is a complex domain, dealing with characteristics of life in cities to meet the needs of urban society. With a changing demography, spatial and socio-economic conditions, urbanization is experienced in the globalized cities, as half of the world’s population live in large cities and towns in 21st century. There are ongoing debates on positing ‘urban’ in social science, science and technology and in arts disciplines, which interpret and define the meaning of ‘urban.’ However, the existing disciplines are interdisciplinary, intersectional and diversified with various approaches, models and theories to study urbanism. Towards the goal of arriving at the subject treatment of urban, this paper analyzes the domain of urban studies through Library of Congress (LC), Dewey Decimal Classification (DDC) and Universal Decimal Classification (UDC) schemes. Through this analysis, we investigate the key disciplines, vocabularies, and diversity of subjects in urban studies.

Keywords: domain analysis; urban studies; classification schemes; urbanization; LC; UDC; DDC.

Introduction

Urban represents a way of life, having characteristics of a city or town with indicators of development, denoting diffusion of urban culture and the evolution of urban society. Settlements of human had grown along civilizations, which led to urban form in the past few centuries, fostering urban empires, nation-states, trade and nationalism across borders and through dominant mercantile cities of Europe and colonial cities in Asia (Steinbacher & Benson, 1997; Bounds, 2004). Urbanization shifted people from rural to urban areas in late 18th century through early 19th century in European societies and in the countries birthed by European emigration, primarily the Western society (Australia, United States, Canada and New Zealand) and diffused to Latin America, Asia and Africa. The rise of urban development is intertwined with development of capitalist economy, industrialization and formation of industrial cities (Boyle, 2015). Human settlements and urban community growth gave rise to town planning principles, established public health systems, transformed social structures, and developed urban communities of cities, spaces and regions in their forms, processes and functions (Johnson, 2006).

Rapid population growth in the 20th century, depleting natural resources, effects of human beings on nature, biodiversity loss and changing climate have led to rethink the ways cities are

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1https://en.oxforddictionaries.com/definition/urbs
governed for sustainability. Changing urban scenes, urban patterns, cross-culture of cities and suburbs around the world are distinct for their commercial, residential, spatial features (Abrahamson, 2004; Palen, 2018) and remain challenging for policymaking as they differ in studying their ‘ideologies, research methods, theoretical orientations, academic disciplines, and/or levels of analysis’ (Philips, 2009). Cities became revolution for economic prosperity and wealth creation. However, they are equally going through crisis of resources, affordable housing, governance amidst growing poverty and inequality (Weaver, 2017; Florida, 2018). The 21st century planetary urbanization and globalized cities calls for critical new urban theory, which is for humanistic, sustainable urban development. Globally many nations, city governments, nonprofits and international organizations played a key role to discuss the persisting urban challenges through policy dialogues and action plans, besides educators and practitioners. UN Habitat I, II, III conferences and adapting Sustainable Development Goals (specifically Goal 11 for Human Settlements and New Urban Agenda) were significant to reconsider urban systems important for building inclusive, safe and sustainable urban communities (UN Habitat, 2016; United Nations, 2017; United Nations, 2018).

Urban studies involve studying the history of urbanization processes, definition of urban areas and their classification, patterns of urbanization, settlements systems, city and regional scales, rural-urban linkages and the urban policy, trends and socio-economic aspects of cities (Ramachandran, 1992; Sivaramakrishnan, Kundu and Singh, 2005). Parker’s interpretation of urban theory consists of ‘the four Cs’ of urban experience—Culture, Consumption, Conflict and Community (2015, p. 4). Subsuming urbanization (spatiality, scale of the cities) and urbanism (social change and mobility), urban studies do not have its own “academic discipline” status in some respects, however, “is an intellectually coherent, distinctively structured, and promising field of inquiry steered by complex, ever-changing, and often large-scale realities and real-world problems of evolving human settlements (Bowen, Dunn and Kasdan, 2010, p. 199).” Urban studies is

the umbrella for several disciplines engaged in studies of the city, including sociology, geography, economics, political science, anthropology, urban planning, architecture, and urban design. Practitioners of these linked disciplines study urbanization and issues surrounding metropolitan dynamics, the process that links cities with the wide economy, governance, and their spatial structure and change expressed in physical, economic, social, and cultural dimensions. These disciplines use distinctive epistemologies in understanding the city, but the issues they address typically cut across disciplines (Green and Kurban, 2008).

This study investigate the domain of urban studies encompassing its concepts, foundations and theories in an interdisciplinary approach. Adapted from Bates and Maack (2009), for example, urban studies constitute: 1. General fields: e.g. Urbanization 2. Disciplinary specialities: e.g. Planning, Geography, Sociology 3. Cognate disciplines: e.g. Epistemology, Ontology. Through historic, social, economic, political, legal, ideological and environmental factors, urban as a method of research or doing urban research has gained traction (Levy, 2017). Urban theories are evolving, with their interdisciplinary approaches, essentially during different periods by various thinkers of space, place and geography through methodological and empirical research methods, which in the process generated various theories that co-exist, making the contemporary urban
studies and planning heterogeneous (Koch & Latham, 2017). Henry Lefebvre’s *The Production of Space*, Louis Wirth’s *Urbanism as a Way of Life* are few seminal examples, but also Weber, Durkheim, Marx and Engels examined the urban question in their analyses of capitalism (Saunders, 1986).

Urban contexts vary differently and though some core disciplines and subfields are common, their relations between the subfields vary across countries and regions. There are debates and claims against situating theories of city in social, political, economic, historical, geographical, environmental and cultural contexts. According to Paddison (2001, p. 5-6) some of the major approaches, which looked at studying cities are: spatial/economic of locational analysis and spatial networks; sociological of socio-cultural, socio-political community and community-urban power studies, Neo-Marxist, urban planning/reconstruction/policy-making and postmodern.

Cities in globalization played a major role, where urban form manifested as megalopolis, global city-region, mega city-region, metropolitan regions, megaregions to planetary urbanization (Harrison & Hoyler, 2015). Bounds (2004) categorized the social theory of city as—classical, Chicago School, symbolic interactionism, critical theory—ideology and knowledge of Frankfurt School, contemporary Marxism and political economy, contemporary social theory and postmodern urbanism, which collectively shaped studying urban theories. Less known, increasingly challenged and questioning popular canonical assumptions of social theories of urban are southern theory from the global South in a variety of settings (Connell, 2014; Bhan, 2019).

Urban studies in its interdisciplinarity sought coherence between different forms of knowledge, produced by different disciplines. Cities are objects pertaining to many realities, as a microcosm of society and as an expression of modern life:

as a result, numerous disciplines have focused on the city as an object of study: for example, anthropology, architecture, economics, engineering, history, geography, (environmental) psychology, semiology, (urban) sociology, political science, philosophy, as well as literature, poetry and music (Ramadier, 2004, p. 435).

Half of the global population is living in urban areas for the first time in human history and hence led to global critical inquiries on how our towns and cities are studied today (UN-DESA, 2018). While some may be self-contained or coherent but most tend to overlap or draw from other disciplines (e.g. Cities and climate change, City politics, Urban leadership, Cities and towns in literature and Urban economics). We found that contemporary discourses in urban context cover anything that is experienced or conceived in urban studies, the conceptual boundaries never designates one imaginary line as urban studies and all the others are something else, as there is no clear boundaries that defines urban studies as a property of a single academic discipline. For example, it is difficult to differentiate what constitutes urban geography from human geography and so is urban sociology from general social theory (Harding & Blokland, 2014, p. 1). Here, domain analysis helps to draw, map and incorporate key components from various theories in urban studies. In mapping those urban concepts at the intersection of domain analysis and knowledge organization systems, this helps to enhance the understanding of ‘urban’ with each contributing to the other component. Knowledge organization systems play a crucial
role in identification of core concepts, as essential building blocks for development of domain ontologies (Smiraglia, 2015; Zolyomi and Tennis, 2017). An example of how urban is treated in geography and social sciences is exhibited in Figure 1, organized at the Directory of Open Access Journals (DOAJ) website.

![Browse Subjects](https://doaj.org/subjects)

Figure 1. ‘Urban’ in geography versus social sciences (Source: DOAJ).

Building on new scientific methods in the domain discourses of urban, cities needs science to build resilient societies, drive smart governance and enable citizen participation (Townsend, 2015). Calling for a global urban science, the Expert Panel’s report titled ‘Science and the Future of Cities’ recommended that cities need multidisciplinary knowledge cross-cutting various domains, that will bridge the gaps in building an inclusive, universal science for urban studies, as urban systems are increasingly complex and multi-dimensional, and without a more synthetic and holistic enquiry, we run the risk of creating incomplete solutions. In order for ‘urban science’ to be collectively greater than the sum of its parts it needs to draw from all the sciences — natural, engineering, and social, as well as the arts and humanities — whilst linking directly into practice, and offering effective global assessments of the state of our planet’s urban condition (Acuto et al., 2018, p. 2).

Here is an example to demonstrate this through subject categories of urban. For the book titled: Urban living labs: Experimenting with city futures and the Contemporary urban planning the assigned disciplines by publisher Routledge are:

| >>Urban Studies Cities & Infrastructure (Urban Studies) | >>Built Environment Planning City and Urban Planning |
| >>Environment and Sustainability Environment & the City | >>Geography |

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2 https://doaj.org/subjects
Table 1. Major disciplinary categories of urban studies.

**Definitions**

*Urbanus* (Urbs meaning city) is a Latin word of origin, with a meaning of ‘relating to or characteristic of a town or city.’ Urban, urbanity and cityness are few keywords, which capture the aboutness of city life. Defining cities has been indistinct in urban theory, even if it is rudimentary (Saunders, 1986). As a set of interrelated concepts (e.g. Urban planning), urban settings and activities are contentious to define, as they are complex and interconnected (Levy, 2017). Urban as an unit of study and the bias therein to define it differs, depending upon the discipline it sides with and the variables it measure. Using demography (many people living closely), function (urban centers are the settings for activities and institutions known as “urban functions”) and regions (urbanism is an attribute of regions and societies, not limited to sites, settlements, and states, but integrates a diversity of settlements, for political, economic and religious reasons) is one example (Smith, 2008).

Urban studies do not have any shared definitions, though its study of domains and subfields are highly specialized, yet fragmented in their applications, study, research and practice. Urban in general terms difficult to define, contrasting with it anything and therefore cannot help in isolating as a field of study. A more relaxed view is that there are theories on one hand and urban areas on the other and that urban theory is the first applied to or deduced from aspects of the second. This does not mean important things cannot be said about specific processes in particular cities (Savage, Warde & Ward, 2003, p. 2).

Theories that concern themselves with general social processes are applied - by the original theorists are others - to (or within) towns and cities. In the alternative, theories grow out of specific and consciously chosen urban observations and that the decision not to impose a tighter, limiting definition on the urban means the range of issues that might be covered by the urban theory is huge. The fields expands every time there is a novel meeting between theory and urban

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5 https://en.oxforddictionaries.com/definition/urban
phenomena and there are no conceptual boundaries other than those that theorists as a group effectively choose, through their work to accept (Harding and Blokland, 2014, p. 19-20).

Urban theory is a subset of social theory, but for all the shared conceptual vocabulary that social theory and urban theory possess, the latter is distinguished by its conviction that social, cultural, economic and political life is different in the city, compared with other types of societies (Parker, 2015, p. 4). Brenner uses cityness or the urban dealing with a:

‘concrete abstraction’ in which the contradictory socio-spatial relations of capitalism, commodification, capital circulation, capital accumulation and associated process of political regulationcontestation are at once territorialized, embedded within concrete contexts and thus fragmented and generalized, extended across place, territory and scale and thus universalized (2013, p. 95).

Cities and urbanism became the theme of research in several disciplines and increasingly represented in the urban studies field (Vis, 2018). Paddison argued that:

urban analysis has become a multifaceted, eclectic body of knowledge embracing a wide range of disciplines … and urban studies has fuzzy boundaries and lacks any unified consensus as to its definition. Even the definition of what constitutes a city is itself contested.” As much as study of cities became specialized yet they are fragmented, hence there is a need for a holistic appreciation of the city (2001, p. x).

Definition of ‘urban’ vary country to country, as international comparability of urban and rural distributions are fuzzy (United Nations, 2008). According to Harding and Blokland (2014, p. 19) urban theory is “a body of ideas explaining one or more aspects of reality within, or of towns and cities.” Urban studies are about how cities and urban spaces are organized, used and negotiated through their processes, functions and forms across cultures, crosscutting globalized cities, through their social, cultural, economic and political perspectives, employing various concepts, theories and methods of study. Here Vis offers a definition of city based on social practice:

a city is a contiguous locus positioned in the physical landscape, which has been developed for human inhabitation through social environmental interaction, and is resided in to such extent that for a predominant number of the population there is no unavoidable need to leave its confines. All of everyday life’s necessities can be met through social relations, either directly or indirectly (i.e. using relations to agents and (resource) locations external to the contiguous locus’ confines), which can be found within its confines. The interactions of everyday life, in turn, are constitutive of, accommodated by and mediated by the environment. (2018, p. 25)

There is no doubt that increasing planetary urbanization is shaping the modern life (Brenner, 2014). What is a city? How do we define it? What determines the urban reality as the interconnected metropolitan areas, mid-sized cities and towns evolve? Defining them become crucial as increasingly there are geographical areas that do not clearly fit inside or outside such a classification (Brezzi, 2012). With significant advances we made in defining urban areas, various settlements patterns strive to define to what extent urbanized we are (Gottdiener and Budd, 2015). For example in India, the official distribution of settlements are based on population, density and labour conditions, however, what is an urban area and how to recognize an urban settlement in India remains unclear. Further, the census definition of “urban” are: 1. Settlements
with a recognized urban local governing body. Settlements satisfying the following three conditions: a. Population greater than 5,000 persons b. Population density greater than 400 persons per square kilometer c. At least 75% of male main workers involved in non-agricultural pursuits (Jana, Sami and Seddon, 2014; Joshi and Pradhan, 2018). Accurate definitions of urban regions are crucial to drive socio-economic policies of the countries and development programmes and using scenarios to explore urban futures (Tandel, Hiranandani and Kapoor, 2019; Townsend, 2015). See Figure 2 to understand the semantic relationships of urban areas defined in AGROVOC Multilingual Thesaurus.  

Figure 2. Semantic relationships for “Urban areas” in AGROVOC Thesaurus

Do the urban regions need more attention of policy makers at local, regional, subnational and nation level to make them better places for governance? Cities significantly contribute to the growth of states and for economic development, delivery of social and environmental goals and in improving quality of living. However, existing knowledge structures and their interdisciplinarity is fuzzy and covers a broad canvas not as a single academic discipline. In the light of this, organizing a complex, ever-changing and expanding nature of urbanism concepts is an arduous and intellectual task. Across disciplines, the urban scholarship draw various tools to define the urban complexity – through comparative urbanism, social network analysis, and data visualization tools (Harrison & Hoyler, 2018).

Urban as a concentrated, agglomeration of densely populated place of people, buildings and infrastructures differ in their treatment of disciplinary perspective. As urban problems grow, they got public attention, governmental action and policy support; urban education and graduate programs were established, broadening the characteristics of urban issues, helping to deepen the

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6 http://aims.fao.org/standards/agrovocFunctionalities/search
urban approaches, creating specializations, spatial-environmental implications, socio-economic policy planning and analytic-methodological perspectives, within urban studies field (Rodwin, 1973).

Space, state, territoriality, location and periphery have examined cityness in variety of ways. For Simone (2010) the five facets of periphery of urban life are mobility, hierarchy of urban functions and capacities, popular working-class, collective urban experiences, and urban peripheries (p. 44-51). Urban planning generally includes urban design, urban renewal and community development, transportation planning, economic development planning, growth management, smart growth, sustainable development, planning for disasters, environmental and energy planning, planning for metropolitan regions, patterns of growth, urbanization, housing and regional economics. Moreover, urban development analyzes reurbanization, affordable housing, transport planning, policy and technology, standards for green buildings (Levy, 2017).

Urban history deals with space and social identity, power and governance, the built environment, culture and modernity, and transnational networks (Ewen, 2016). In order to understand what disciplines constitute urban scholarship, in a survey of internal structure and scholarship in the urban studies, Bowen, Dunn and Kasdan (2010) analyzed the textbooks of urban studies and programs in the USA. They found the following key disciplines through urban education, research and practice: Urban Sociology, Urban Governance, Politics and Administration, Urban Economics, Urban Geography, Urban Planning, Design & Architecture Environmental Studies, Housing & Neighbourhood Development. These disciplines have a large degree of confusion between subfields and considerably vary in terms of concreteness versus abstraction, people versus place orientation, and locus of control with overlaps. For example, the indistinguishable Housing and Neighbourhood Development could be contained with the Urban Planning, Design and Architecture, whereas Environmental Studies remains highly distinct from the other subfields. In their critique of Bowen et al (2010) study, arguing for history in urban studies, Harris and Smith (2011) examined the role of urban history in shaping the urban studies. Moreover, urban restructuring in the early 21st century, calls for critical urban theories, given that urbanization needs to be studied more systematically and comprehensively for its far-reaching transformations and interdisciplinarity (Brenner, 2009; Reese, 2014; Hall and Burdett, 2018). See Figure 3 at US National Agricultural Library for the thesaurus definition of urban areas.7

Objectives of the Study

1. What is the subject treatment of ‘urban’ in library classification schemes – Library of Congress Classification, Dewey Decimal Classification and Universal Decimal Classification?
2. What are the key disciplines that constitute urban scholarship?
3. How do the thematic areas of urban manifest in organizing urban studies domain?

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7 https://agclass.nal.usda.gov/mtwdk.exe?k=default&l=60&w=26408&n=1&s=5&t=2
This study used the following three library classification schemes to identify the urban concepts covered in different main classes, subclasses and common auxiliaries in-depth in:

The domain analysis of urban studies involved identifying primary subjects in the urban discourses, using documentary evidence for synthesis of key disciplines. Five of the keywords used for this purpose are: urban, city, local, regional, and settlements. See Figure 4 for the growth of literature on urban, exhibited in the Google Books Ngram viewer, which has been growing since 19th century.8

From an urban librarianship practice, a select list of urban textbooks and edited works were identified. Using the Library of Congress Subject Headings (LCSH), few books are methodically selected to show the disciplinary diversity of urban focused subjects. Through practice, few divergent emerging areas observed are presented using key published books with their LCSH subject headings to show the various disciplines of study, where urban is studied through different facets of methodical, research and practice perspectives. However, since this study evaluated urban at the top-level class and divisions in library classification schemes, hence, at the core is in-depth, but its breadth is limited in scope and not comprehensive of urban studies domain. Some of the books listed here demonstrate this through the subject headings (LCSH). See section urban studies in DDC.

Analysis and Findings

Key Vocabularies

Since urban studies do not have a widely accepted canon, elusive in nature and fundamentally draws on from other disciplines, it is essential to capture key vocabularies, which define them. In the course of the domain analysis, we found the following definitions are central to understand the urban. The growth of this vocabulary since the early 20th century is shown in Figure 5, wherein 1960s had a sharp increase in urban affairs and research.9 This key vocabulary connote meanings, which distinguish them as they evolved in the urban scholarship and discourses, over different periods:

**Ekistics** – is the science of human settlements. It involves the descriptive study of all kinds of human settlements and the formulation of general conclusions aimed at achieving harmony between the inhabitants of a settlement and their physical and sociocultural environments (Doxiadis, 2005; Sampaolo and Gaur, 2018).

**Human Settlements** – is an integrative concept that comprises: (a) physical components of shelter and infrastructure; and (b) services to which the physical elements provide support, that is to say, community services such as education, health, culture, welfare, recreation and nutrition (United Nations, 1997).

**Urbanization** – is increase in the proportion of a population living in urban areas; and a process by which a large number of people becomes permanently concentrated in relatively small areas, forming cities (“Urbanization”, 2003).

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8 http://books.google.com/ngrams
9 http://books.google.com/ngrams
Urbanism – is descriptive of the way of life found in the modern city. Seen as an essentially impersonal, secondary, and contractual way of life, associated in its extreme form with anonymity and transient contact. Moreover, urbanism is fluid and competitive and varies with places and times (Wirth, 1938; Anderson, 1959).

Urban Studies – is a coherent field and is of practical value, as it remains oriented toward the creation, preservation, transmission, and validation of knowledge about urban settlement systems, integration of otherwise isolated facts relevant to such systems, and/or the application of such knowledge in service of urban communities (Bowen, Dunn and Kasdan, 2010, p. 201).

Figure 4. Growth of urban literature from 1800-2008.
Comparative subject treatment of ‘Urban’ in LC, UDC and DDC Schemes

In order to synthesize the urban subjects and to demonstrate urban treatment and vocabulary control, Table 1 is extracted from Library of congress Classification, Universal Decimal Classification and Dewey Decimal Classification schemes and we compared the subject treatment of urban. All the three classification schemes, have rich history of organizing universal knowledge, periodically updated and have been extensively used in public, specialist and academic libraries worldwide (See their edition history in Methodology section). Each of them vary in their approach to study urban studies. This section outlines the predominant subjects emerged in comparing these three schemes, as below:

1. **Urban Planning and Development**

Planning in LC mainly includes city planning, regional planning and economic planning, whilst the former two are highly interlinked, economic planning involves measuring economic growth and development, in terms of land use, agriculture, industries and businesses, labour, work and working class, special industries and trades (Library of Congress Classification, 2018). Under social sciences, as a community, DDC has a strong focus on planning and development of cities, urban policy and urban sociology. However UDC and LC treat city planning under arts in Class 71 for physical planning, regional, town and country planning, landscapes, parks, gardens under Fine Arts (FA) respectively.

<table>
<thead>
<tr>
<th>DDC</th>
<th>The Arts – 700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences – 300</td>
<td>Area planning and landscape architecture</td>
</tr>
<tr>
<td>Communities (Class 307)</td>
<td>(Class 711)</td>
</tr>
</tbody>
</table>
### Table 2. Distribution of urban in disciplines

In social sciences, urban as a community has been strongly represented in LC and DDC schemes, however it goes under physical planning in UDC and area planning in DDC. In DDC, area planning under architecture treats equally a large part of planning aspects of city planning in designing physical environment for public, welfare, convenience and pleasure and is inclusive of urban renewal, conservation, rehabilitation and redevelopment. In UDC, however, city planning became the prime focus as in physical planning, regional, town and country planning and landscaping aspects. UDC concentrates on preservation of rural and urban amenities generally, including rural and urban road systems. Community development has been an integral part of this discourse. Urban communities in social aspects are treated in social sciences in DDC, whereas livability of community through architecture is dealt in 711 under area planning. Both the LC and DDC have focused on urban as a community, where sociology, classes and races are treated in great deal. LC brought settlements under the geography, whereas DDC has under communities in social sciences.
2. Rural-urban Relations

Urban/rural binaries are predominant and rurban linkages are inseparable in DDC and LC schemes. In DDC, rural development goes under the planning and development, whereas LC has this as Rural groups and Urban groups (See Table 3). Both the LC and DDC have rural sociology as part of this community discourse. In DDC, rural-urban continuum includes migration to and from rural to urban areas, including resettlement (DDC, 2011, p. 362).

<table>
<thead>
<tr>
<th>DDC</th>
<th>UDC</th>
<th>LC</th>
</tr>
</thead>
<tbody>
<tr>
<td>307.1416 Rural development</td>
<td></td>
<td>HT101-395 Urban groups. The city. Urban sociology</td>
</tr>
<tr>
<td>307.2 Movement of people to, from within communities</td>
<td>728 Domestic architecture. Housing. Residential buildings</td>
<td>HT321-325 The city as an economic factor. City promotion</td>
</tr>
<tr>
<td>307.24 Movement form rural to urban communities</td>
<td></td>
<td>HT330-334 Metropolitan areas</td>
</tr>
<tr>
<td>Class here rural exodus</td>
<td>728.1 (1-22) Rural housing. Dwellings in the country</td>
<td>HT351-384 Urbanization. City and country</td>
</tr>
<tr>
<td>307.26 Movement from urban and rural communities</td>
<td></td>
<td>HT401-485 Rural groups. Rural sociology</td>
</tr>
<tr>
<td>Class here urban exodus</td>
<td></td>
<td>HD2330 Rural industries</td>
</tr>
<tr>
<td>307.72 Rural communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class here rural sociology, rural villages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>307.74 Suburban communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>307.76 Urban communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class here urban sociology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>307.762 Small urban communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class here comprehensive works on villages</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Rural-urban relations in classification schemes

3. Urban as a place (Common Auxiliaries)

As one of the common form of expression, space, in all the three schemes, identify urban and treat it in a variety of ways, as areas, regions, places in general in the common auxiliaries of classification schemes. In DDC Table 2 notations 11-17 deals with continent, country and locality, then get characterized by zonal, physiographic and socioeconomic regions. LC has
special class spatial studies (GF95), whereas UDC has a unique treatment of study for areas in geography for Area studies (908) as study of a locality. Class here comprehensive studies of the history, geography, customs, culture, economy etc. of an area. Table 4. shows the treatment of urban:

<table>
<thead>
<tr>
<th>Socioeconomic regions</th>
<th>DDC. Table 2: Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 172</td>
<td>Developed regions</td>
</tr>
<tr>
<td></td>
<td>Developing regions</td>
</tr>
<tr>
<td>- 173</td>
<td>By concentration of population</td>
</tr>
<tr>
<td></td>
<td>Urban regions</td>
</tr>
<tr>
<td></td>
<td>Suburban regions</td>
</tr>
<tr>
<td></td>
<td>Rural regions</td>
</tr>
<tr>
<td></td>
<td>Rural villages</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Common auxiliaries of place</th>
<th>UDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1/9) Common auxiliaries of place. Table 1e</td>
<td>(1-2/4) Political units. Administrative units</td>
</tr>
<tr>
<td></td>
<td>(1-2) Lowest administrative units. Localities</td>
</tr>
<tr>
<td></td>
<td>Including: Districts, communes, municipalities etc.</td>
</tr>
<tr>
<td></td>
<td>(1-24) Joint local administrative units</td>
</tr>
<tr>
<td></td>
<td>Including: Cantons</td>
</tr>
<tr>
<td></td>
<td>(1-25) Capital cities. Metropolises</td>
</tr>
</tbody>
</table>

Table 4. Place in library classification schemes.
<table>
<thead>
<tr>
<th>LC. Class H. Subclass HT.</th>
<th>UDC. Class 7. Subclass 71.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT51-1595 Communities. Classes. Races</td>
<td>71 PHYSICAL PLANNING. REGIONAL, TOWN AND COUNTRY PLANNING. LANDSCAPES, PARKS, GARDENS</td>
</tr>
<tr>
<td>HT51-65 Human settlements. Communities</td>
<td>711 Principles and practice of physical planning. Regional planning. Town and country planning</td>
</tr>
<tr>
<td>HT101-395 Urban groups. The city. Urban sociology</td>
<td>711.1 Urban town planning</td>
</tr>
<tr>
<td>HT165, 5-169.9 City planning</td>
<td>711.6 Arrangements of buildings in towns. Site planning. Grouping</td>
</tr>
<tr>
<td>HT170-178 Urban renewal. Urban redevelopment</td>
<td>711.7 Traffic routes (layout, planning)</td>
</tr>
<tr>
<td>HT201-221 City population</td>
<td>711.8 Public utilities. Distribution lines. Supply lines</td>
</tr>
<tr>
<td>HT231 Including children in cities, immigration</td>
<td>711.9 Subsurface utilities</td>
</tr>
<tr>
<td>HT281 Mental and moral life</td>
<td>712.3 Landscape gardening in general (planning, layout, design, execution)</td>
</tr>
<tr>
<td>HT321-325 Recreation. Amusements</td>
<td>712.4 Planting design. Vegetation; plant forms (arrangement, planting)</td>
</tr>
<tr>
<td>HT321-325 The city as an economic factor. City promotion</td>
<td>712.5 Water features</td>
</tr>
<tr>
<td>HT330-334 Metropolitan areas</td>
<td>HT301-348 Flowing waters. Rivers, streams</td>
</tr>
<tr>
<td>HT351-352 Suburban cities and towns</td>
<td>HT401-485 Still waters. Lakes, ponds</td>
</tr>
<tr>
<td>HT361-384 Urbanization. City and country</td>
<td>HT390-400 Structural features in general</td>
</tr>
<tr>
<td>HT388 Regional economics. Space in economics</td>
<td>HT390-395 Details by .24, .39, .72...</td>
</tr>
<tr>
<td>HT390-395 Regional planning</td>
<td>HT401-485 Garden ornaments</td>
</tr>
<tr>
<td>HT401-485 Rural groups. Rural sociology</td>
<td>HT601-1445 Cemeteries. Graveyards. Crematoriums. Other places for disposal of the dead (planning, design, upkeep etc)</td>
</tr>
<tr>
<td>HT601-1445 Classes</td>
<td>718 Preservation of rural and urban amenities generally</td>
</tr>
<tr>
<td>HT621-635 Origin of social classes</td>
<td>719 ⇒ 502</td>
</tr>
<tr>
<td>HT641-657 Classes arising from birth</td>
<td>Including race as a social group and race relations in general</td>
</tr>
<tr>
<td>HT675-690 Including royalty, nobility, commons</td>
<td>719 Preservation of rural and urban amenities generally</td>
</tr>
<tr>
<td>HT713-725 Classes arising from occupation</td>
<td>⇒ 502</td>
</tr>
<tr>
<td>HT713-725 Caste system</td>
<td>719 Preservation of rural and urban amenities generally</td>
</tr>
<tr>
<td>HT721-731 Freedmen</td>
<td>719 Preservation of rural and urban amenities generally</td>
</tr>
<tr>
<td>HT751-815 Serfdom</td>
<td>719 Preservation of rural and urban amenities generally</td>
</tr>
<tr>
<td>HT851-1445 Slavery</td>
<td>719 Preservation of rural and urban amenities generally</td>
</tr>
<tr>
<td>HT1501-1595 Races</td>
<td>719 Preservation of rural and urban amenities generally</td>
</tr>
</tbody>
</table>

Table 5. Comparative subject treatment of ‘Urban’ in LC, UDC and DDC
Table 5. (Contd.). Comparison of subject treatment of ‘Urban’ in LC, UDC and DDC
**Urban studies in DDC: A case study coverage and disciplines: The case of DDC**

DDC as a general library classification scheme is widely used in Anglo-American countries and in other countries where English as a second-language is used, mainly in organizing knowledge in print and electronic media among academic libraries. Enumerative in nature, DDC is periodically updated; stay current to capture emerging fields and disciplines. This section looks at the key disciplinary concentrations of urban, as organized in the Edition 23. Following is the section of book examples, including edited books. This is to demonstrate key documentary evidence, where urban as a core subject of study is discussed through main and applied areas of study, research and practice. Below the each reference, Library of Congress Subject Headings (LCSH) are provided.

### 100 Psychology

**155.942 Environmental Psychology**


*City and town life – Psychological aspects.*

### 200 Religion

**270 Cities and towns in Christianity**


### 300 Social Sciences

**304.2 Human Ecology**


*Human geography*


*Urban ecology (Sociology) – Handbooks, manuals, etc.*


Urban ecology (Sociology). Sustainable development.

305.569091724 Urban Poor

307.1216 City Planning

City planning – Social aspects.


307.1416 Urban Development

307.336 Urban Slums

307.76 Communities


Urban ecology (Sociology). Urban ecology (Biology).

Urban geography.


Cities and towns – Growth.


Urban geography. Human geography.


**320.85 Urban Politics (City government)**


Barber, B. R. (2013). *If mayors ruled the world: Dysfunctional nations, rising cities*. New Haven: Yale University Press.


**330.91732 Urban Economics**


Urban economics. Regional economics.


Urban economics.


Urban economics.

Urban economics.

**331.120954 Urban Informal Labour**

Informal sector (Economics) – India – Congresses. Small business – India – Employees – Congresses.
Women – Employment – India. Labor supply – India.

333.5095957 Urban Land Use


333.79091732 Urban Energy

336.01454 Local Finance
Municipal finance – India. Municipal revenue – India. Local taxation – India. Municipal services – India. Municipal government – India.

338.927091732 Sustainable Development
Urban ecology (Sociology). Sustainable urban development. City planning – Environmental aspects.

338.191724 Urban Agriculture


352.16 Urban Administration
City planning – India. City planning – Bangladesh. City planning – Pakistan.


Municipal government – India – Case studies. Urbanization – India – Case studies.

**346.045 Law for Regional and Local Community Planning**


**361.6 Socioeconomic Planning and Development (Governmental/social action)**


**362.1042 Urban Health**


362.5 Urban Poverty

Urban poor – Developing countries. Poverty – Developing countries.

363.342 Climate Change and Disasters


363.5 Urban Housing

363.60681 Urban Infrastructure

363.73874 Urban Climate
Climatic changes – Environmental aspects. Climatic changes – Government policy. Urban ecology (Sociology)


Climate change mitigation. Urban climatology. City planning
363.8 Urban Food Supply

364.9 Urban Crime

370.91732 Urban Education


388.4 Urban Transportation

500 Science

551.66091732 Microclimatology

577.56 Urban ecology
Urban ecology (Biology).


600 Technology

628.114091732 Urban Water

630.91732 Urban Food

635.977 Urban Forestry

700 The Arts

700.19 Area Planning and Landscape Architecture (City planning)
Artists – Psychology. Loneliness. City and town life – Psychological aspects.


City planning – Environmental aspects. Pedestrian facilities design.

Motion pictures – India – History and criticism. Cities and towns in motion pictures.

Cities and towns in motion pictures. Cities and towns in mass media.

Theaters – Stage-setting and scenery – Philosophy. Place (Philosophy) in literature. Cities and towns in literature.
800 Literature

809.93321732 Cities and towns in literature

Sanskrit poetry – History and criticism. Cities and towns in literature. India – Social life and customs.

American Literature – History and criticism. City and town life in literature. Cities and towns in literature. Literature and society


Comic books, strips, etc. – History and criticism. City and town life in literature. Mass media and culture.


900 History and Geography

930 Urban History
Human geography - Philosophy.


Maxwell Street (Chicago, Ill.). Chicago (Ill.) – Social life and customs.

Conclusion

Analyzing the urban knowledge is a multifarious task and to draw the boundaries of urban is a time-consuming and insightful process. Urban studies as a field of inquiry is evolving with critical questions of engagement, functions and forms – centric to human settlements to solve, scale up, complex urban realities and real-world problems at policymaking, socio-economic planning and social change levels. The consequences of industrialization, decentralization, and urbanization have to be addressed through urban challenges and opportunities in the 21st century more critically. This paper reviewed the subject treatment of urban through Library of Congress, Dewey Decimal and Universal Decimal classification schemes, which can be studied in parallel to planning, public health, sociology, arts and architecture domains in particular to understand urban aspects. We analyzed urban from a very top-level domain perspective and the subject treatment of urban in classification schemes is demonstrated by identifying, categorizing and building key areas of disciplines in urban studies, with a display of disciplinary categories of DDC. Given the complexity of the urban subject and its transdisciplinarity, our further research will specifically attempt to map the key disciplines and subfields to propose an urban classification to organize urban knowledge, as modelled in other subject classifications such as music, mathematics and economics and so on.

References


