Urban-rural land linkages: Concept explained using 'continuum' theory and metaphor

Uchendu Eugene CHIGBU (Namibia)

Keywords: Continuum; land administration; land management; rural development; spatial planning; urban development; urban-rural land; urban-rural land linkages

SUMMARY

Land-related urban and rural development challenges exist in every country around the world. Land management (including land administration) provide instruments for tackling these problems. Harmonious strategies that broadly respond to urban and rural challenges (concerning the people and the geographical and non-geographical components of these settlements) are much needed to ensure improved living conditions. Such strategies are also necessary to foster good land governance within and across urban-rural borders. Ongoing discourse suggests the need to embrace land-focused development approaches for simultaneously tackling these urban and rural development challenges. Some efforts have already been made in formulating concepts, principles and frameworks toward achieving spatially interdependent urban-rural development. This development condition mutually benefits urban and rural areas. It makes the concept of 'continuum' a mandatory component in urban-rural development. In contributing to this discourse, this paper reviews the concepts of URLLs and continuum to create an understanding of these concepts. It deconstructs the URLLs in the context of the continuum. It discusses the way forward using the URLLs as a land sector continuum-focused strategy in urban-rural development.

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

Urban-rural land linkages: Concept explained using 'continuum' theory and metaphor

Uchendu Eugene CHIGBU (Namibia)

1. INTRODUCTION

Despite the increasing interactions between urban (including peri-urban) and rural areas, the urban-rural development challenges continue rising. The paper contributes to the emerging discourse on the "urban-rural land linkages" (Chigbu, 2021: p. 1), which is an off-shoot of the broader issues around the urban-rural linkage challenge in the majority world from a continuum concept. It hits at the core of harmonising the disparity-ladened or dichotomous relationships that rural and urban areas share in various aspects - including the conceptual, spatial, socioeconomic and policy arena. Taking a land dimension to understand the urban-rural interactive relationships (or interdependencies) would allow for focusing on the living conditions of people (wherever they may live) irrespective of geographical and non-geographical or spatial and aspatial components of human settlements. Existing literature suggests this relationship is not a bilateral or linear process (see Zhu et al., 2020; Rickardsson, 2021; Magel and Chigbu, 2022). Instead, it is a continuum based on backward and forwards exchanges and circular interactions (UN-Habitat, 2019; Sahu, 2019; Chigbu, 2021). If well-coordinated and managed, it can be a development condition capable of mutually benefiting urban and rural areas. To understand this potentially interdependent development scenario, this paper argues for the concept of 'continuum' as a mandatory component in urban-rural land use planning and spatial development. As a concept, theory and metaphor, 'continuum' describes land management activities (e.g., property rights, land tenure, and spatial situations) from different ideological and theoretical dimensions. It can also illustrate how land management situations are or are likely to evolve. Urban-rural land linkages (URLLs) are one of those aspects of land management that still need to become fully understood before subjecting to practical applications, especially in the majority world (i.e., the so-called developing countries or the global south). This paper dug into contemporary literature to unveil various socio-spatial schemas around the 'continuum' to explain the relevance of URLLs. By explaining the URLLs from different 'continuum' perspectives, the paper presents various aspects of URLLs' functionality necessary for achieving interdependent urban-rural development.

The paper is structured as follows. The next four sections (sections 2, 3, 4 and 5) review the concepts of URLLs and continuum to create an understanding of these concepts and their applicability in the land parlance. It deconstructs the URLLs in the context of the continuum

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

(section 5). The section related continuum theory of the URLLs as a development sector concern. The final section (section 7) discusses the way forward using the URLLs as a land sector continuum-focused strategy in urban-rural development.

2. URBAN-RURAL LAND LINKAGES (URLLs) AS A CONCEPT

2.1. URBAN-RURAL LAND DISPARITY HAS EXISTED FROM TIME IMMEMORIAL

The origins of the terms *urban* and *rural* in recorded history extend to at least the classical Latin words *urbs* (city) and *rus* (open space). *Rus* represented the countryside or open space (Archer, 1983). "Urbs describes a city or large town that is a political entity with its territory" (Becker, 2008: 73). When viewed from their original terms – that is, urbs and rus – common sense requires that cities need rural areas and vice versa. But even from time immemorial, frustrations have been expressed concerning the contentious growths that distinguish the *urbs* and the *rus*. Drawing from the narratives from ancient Roman literature, Quintus Horatius Flaccus (the ancient Roman poet popularly known as Horace)¹, in his poems, frequently expressed the desire to overcome "the divorce between country and city" (Archer, 1983: 160). This means that the dichotomous relationship between the urban and rural areas extends back much further, to classical times, at least in Rome, in today's Europe. As Archer (1983: 160) noted, Horace's "use of the terms rus and urbs in his satires, epistles, and odes to express frustration with, and ambivalence about, the disparity between city and country life." In fact, "Given a choice of environments, Horace preferred the so-called "retired" existence — withdrawal into the country from society" (Archer, 1983: 160). Horace (according to Archer, 1983: 181) "praised city life while also lamenting his inability to achieve full freedom as an individual, or to make the best use of his talent as a poet, within the urban confines. By contrast, such rural retreats as Tibur, Tarentum, Baiae, Praeneste, and especially the Sabine Estate were almost sacred places where he could achieve the closest contact with his muse alone." For an extended discussion on this subject, see Mullin (1967).

Although the urban and rural disparity in development might have a long history, the politics of land tenure and imbalance in spatial planning and development continues to leave rural and urban areas to be developed in unequal ways. Even in classical times, still drawing from Horace's narratives, combining city with countryside reflected significant problems in architectural design. "Ancient Roman country villas, Renaissance villas on the outskirts of Rome, and Palladian villas in the Italian countryside all tried to achieve a common goal: the integration of the Horatian ideal of 'retirement' in the countryside, for the spiritual enrichment of the proprietor, with some sense of the society and activity of a more urban environment"

 $^{^{\}rm 1}$ Horace (65 BC—8 BC) was a Latin lyric poet and satirist under the emperor Augustus. 3

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

(Archer, 1983: 160). Horace's narratives aside, other ancient poets who have expressed the urban-rural divide in their poems include Alexander Pope.² Pope, in his works, reflected on the history of the English country homes. By the late seventeenth century, the country house in English poetry and literature poetry "appeared both as a city-like oasis on the barren landscape and as a rural retreat where the proprietor could examine and nourish his spirit" (Archer, 1983: 160).

2.2. CALLING OUT URBAN-RURAL LAND DISPARITY IN MODERN TIMES

Considering that Horace and Pope provide evidence that the rural has been a more peaceful place and different from the urban, it is not wrong to declare that we live (and have always lived) in a world in which disparity in development must be checked. To achieve a world in which everyone enjoys secure land rights in inclusive living spaces and improved livelihoods, understanding the current state of urban-rural land governance is essential. In modern times, efforts (including putting principles, policies and development approaches) to give rural and urban areas equal attention have been part and parcel of the global discourse for development for some time. The levels of engagement on this issue vary in sectors, academic disciplines, professional leanings, and in-country political interests. From the sectoral angle, the rural aspect of this discourse has not received sufficient attention. In this regard, the International Federation of Surveyors (FIG), 2003, committed to putting the topic of "Urban-rural interrelationship for sustainable development" into action for the betterment of everyone in the world (Magel and Chigbu, 2022: 32). This commitment was the Marrakech Declaration of the FIG which sought to raise awareness of urban-rural interrelations for an improved world by tapping into the close linkages urban and rural areas share. Nearly twenty years after that Marrakech Declaration, the issues have evolved, but the problem remains with us.

In recent years (particularly in the past five years), the UN-Habitat has made tremendous strides in bringing the urban-rural linkages (URLs) concerns further to the global arena. In all these efforts, the land issues have not fully been spelt out in radical ways that would make the land professionals recommit strongly to the land issues as a connecting point for urban-rural codevelopment. However, a Global Land Tool Network (GLTN) publication by Chigbu (2021) entitled, *Urban-rural land linkages: a concept and framework for action* directly reviewed the land dimension of the URLs discourse to tease out the land concepts, principles and frameworks for action towards interdependent development. This was identified as the *urban-rural land linkages or URLLs*. Hence, "the URLLs and its framework for action emerged from a

 $^{^{\}rm 2}$ Pope (1688—1744), was a poet and satirist of the English Augustan period. 4

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

collaboration between the GLTN and the FIG in response to land problems that affect urban and rural areas" (Chigbu, 2021: 2).

2.3. WHY AN INTEREST IN URBAN-RURAL LAND LINKAGES (URLLs)?

To understand the meaning of the URLLs concept, it is essential to first grasp the urban-rural configurations and why the broader idea of urban-rural linkages (URLs) is so important. The most recent literature provides a narrative of three spatial worlds, "which are sometimes socioeconomically divided into thriving urban areas, semi-thriving peri-urban areas and declining rural areas" (Chigbu, 2021: vii). The extent to which this narrative is true depends on whom you ask and in what part of the world you live. It seems more accurate in the majority world (so-called developing countries) than in the minority world (so-called developed countries). Yet, in the context of land challenges, its impact can be felt in all these places similarly and differently (Figure 1).

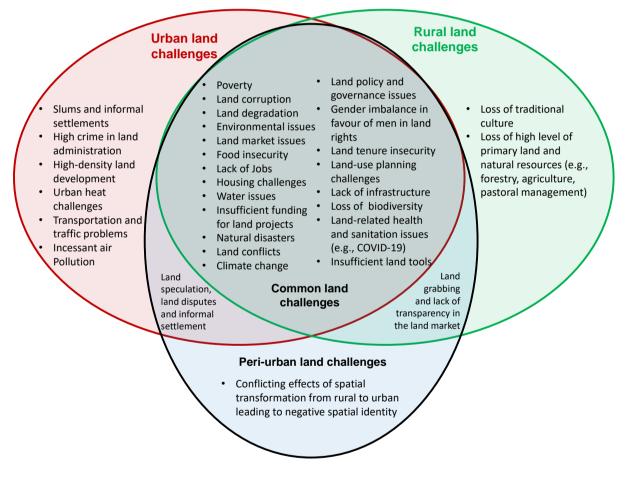


Figure 1: Examples of land challenges in urban, peri-urban and rural areas (Chigbu, 2021: 9)

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

As figure 1 shows, while urban, peri-urban and rural areas each have their land problems, the concern of URLLs is to tap into their commonalities to create mutually beneficial development. Concerning why the broader idea of URLs is essential, the UN-Habitat (2009: 1) has noted that:

"In many settlements, many households live, work in and depend on rural and urban ecosystems that sustain human life beyond political and administrative spheres. The reciprocal and repetitive flow of people, goods and financial and environmental services (defining urban-rural linkages) between specific rural, peri-urban and urban locations are interdependent; they are the reality of socio-spatial arrangements, creating places with distinct yet interwoven, socially constructed identities. From this emerges the possibility of people- and place-based development along the urban-rural continuum, that is, the promotion of urban-rural linkages through "functional territories" that help to reduce regional inequalities and increase resource efficiencies. Formulating and implementing policies and planning interventions that reduce territorial inequality and strengthen urban-rural territories (including in smaller and island countries) could generate better and more sustainable development results that will meet many of the goals and targets in the sustainable development goals (SDGs), the new urban agenda (NUA) and other, parallel international agendas."

Some justifications necessitate the embrace of the URLLs concept and its associated framework. Some of the reasons are that rural land will continue to be in high demand in line with the growing global urban population (Chigbu, 2021). The number of people living in cities is expected to grow by 175 per cent by 2030 (UN-Habitat, 2019). About 70 per cent more agricultural land is needed by 2050 (UN-Habitat, 2019a, 2019b). There will be consequences if this target is not met. Also, involuntary displacement or resettlement due to climate change and other natural disasters will continue. It also means that communities will continue to be displaced in urban and rural areas if no unified action on climate change mitigation is taken. Furthermore, women, youth and other disadvantaged groups will most likely continue to have limited access to land. These ongoing and expected challenges require spatially-enabled and connected efforts toward improved continuum-focused land administration (and land management) projects and programmes capable of simultaneously tackling most rural and urban development challenges (Chigbu, 2021).

2.4. THE URBAN-RURAL LAND LINKAGES (URLLs) CONCEPT EXPLAINED

The relationship between rural and urban development is based on interactions driven by structures of land ownership, land use, space utilisation, property rights and general interests people and organisations have in land and natural resources. These interactions are also the driving force that causes the movement of goods, people, information and knowledge. The URLLs concept recognises that these forces constitute a partnership worth leveraging for 6

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

mutual development between urban (including peri-urban) and rural areas. These forces, which are both spatial and aspatial, are embedded in some key factors that motivate interactions between urban and rural areas.

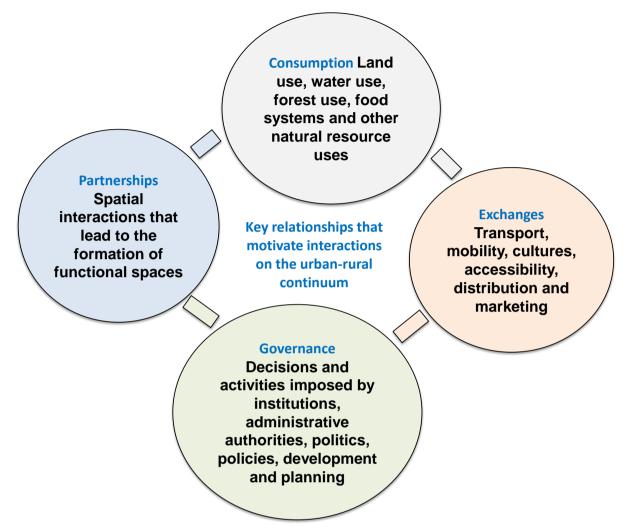


Figure 2: Factors of interactions between urban, peri-urban and rural areas (Chigbu, 2021: 17)

As figure 2 shows, the conscious or unconscious interrelationships urban (including peri-urban) and rural areas share manifest in various forms (e.g., governance, partnerships, consumption, multiple exchanges). Each of these factors (the sub) can influence the whole. For instance, as expressed by Chigbu (2021: 17):

"Excessive consumption or demand for rural natural resources (e.g., land, water, forests and minerals) by urban or peri-urban residents can pressure these resources. Regarding governance, natural resource decisions made (or activities carried out) in one space can 7

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

influence other spaces. The various exchanges (e.g., mobility, distribution, transport) form relationships that make these areas interdependent. To achieve a balance in developing these areas, it is essential to view these relational factors as shared opportunities rather than threats."

What then do URLLs mean or specifically allude? URLLs, as a concept, "evolved from ideas in the relevant literature and experiences drawn from case studies that reflect how urban and rural land can be better managed and administered to ensure security for everyone" (Chigbu, 2021: 2). It is a paradigm for understanding the land administration and land management dimension of the urban-rural linkages or interactions. It is an essential concept in urban and rural development because land-related urban and rural development challenges exist in every country around the world. Land management (and land administration) remains the most formidable instrument for tackling these problems within and across borders, political administrations and development policies. URLLs highlight what is required to achieve an urban-rural continuum of development and how affordable land tools (i.e., approaches to making development interventions) can be better utilised for this purpose.

3. THE 'CONTINUUM' THEORY AND ITS APPLICATIONS

Whenever researchers have written about, referred to or alluded to the term continuum, they have usually viewed it as a metric of connectedness or *alongsideness* (Charatonik, 1998). In the context of connectedness, it refers to end-to-end linkages between two or more entities. When viewed as *alongsideness*, it relates to creating and sustaining connections (Cyriac, 2022). In contemporary literature, the origin of a continuum concept is hinged on the notion of continuity, which goes back to the ancient traditional African and Greek civilisations.

The ancient African civilisations believed in the concept of continuity of life beyond the hereafter. They viewed birth not as a beginning but as a continuity of previously lived life here or somewhere. This concept of continuity of life led to the notion of reincarnation in African traditional religions (Asogwa and Onwuama, 2022). The African origin of continuum developed as a set of beliefs in the effects and influence of continuity, which results in the connectedness or alongsideness of several other concepts and practical ways of living. This continuum perspective is related to various forms of evolutionary thinking, which today have influenced the evolutionary theories of property.

The Greek origin of continuum, which later evolved into models' continuum, is best explained through a theory. The ancient Greeks studied the continuum as a mathematical concept interested in the linear continuum and tried to understand and clarify its nature (Charatonik, 1998). The Greek and African perspectives of the continuum (which existed in the ancient 8

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

oriental world) have influenced the broad continuum theory and its metaphorical usage as it is viewed today.

In literature, the continuum can be understood differently in different disciplines. Enrigen (1992: 4078) identified the theory to be applied when dealing with "liquid crystals whose molecular elements can expand and contract, in addition to undergoing translations and rotations." While thermodynamics influence this continuum description, it is easy to identify that the use of "expand" reflects the quality of connectedness, continuity, and discontinuity in material formations. Samples (2017: 3) notes that continuum is "the study of compact, connected, metric spaces." This definition is influence by the importance of continuum in engineering, particularly mathematics. This influence is evident as Samples (2017: 3) further asserts that "these spaces arise naturally in the study of topological groups, compact manifolds, and in particular the topology and dynamics of one-dimensional and planar systems and the area sit at the crossroads of topology and geometry." This definition is essential in this paper because it draws from the literature mosaic.

Looking deeply into literature (see Enrigen and Ingram, 1965; Board, 1989; Leslie, 1992; de Souza and Bazant, 2020; Qu et al., 2022), it is correct to argue that there is no specific theory but rather a variety of applicable continuums within defined disciplines or field of enquiries. "Many naturally occurring objects in topological and complex dynamics are most appropriately studied in the context of continuum theory" (Samples, 2017: 10). In physical sciences, for example, continuum theory is used to describe the space-time continuum model, which posits that space and time as part of the same continuum rather than as separate entities (Telezhko, 2022). Linguistics is used to assert why a range of dialects spoken over a geographical area could differ slightly between neighbouring areas (Parra and Proctor, 2022). This is known as a dialect continuum (Galen et al., 2022). In quantum mechanics, the theory is used to maintain why in using quanta, some defined amounts (such as categorical amounts) are differentiated from continuous amounts (Liu et al., 2022.). It has applicability in ecological restoration (Chigbu et al., 2021). The theory is commonly applied in mathematics, planning, economics, geography, philosophy, sociology and various sciences. Some scholars "interpret it as being a component of modernisation theory and evolutionary development theory" (Barry, 2015: 3). These multiple applications of the theory across disciplines and research areas justify why the continuum is no standalone theory but one that is applied to various areas of research. It also explains why Barry (2015: iii) considers it to be "a metaphor and is not a theory in its own right). Barry's (2015: iii) argument for identifying it only as a metaphor is hinged on it being a term that "can be used to describe and explain a land tenure situation from different ideological and theoretical perspectives" usable "to make predictions about how a situation is likely to evolve." It is three things in this paper – that is, theory, concept and metaphor.

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

As a theory, the continuum can be used to scientifically serve as a general principle that explains the phenomenon of property rights evolution and transition from one form to another. As a concept, it serves as a general idea or understanding of the evolution and transitions in property rights structures. Notwithstanding semantics, its retinue of applications in various research areas (or disciplines) is not engaged in this paper. The focus here is on land management and administration or related professions, including planning and area development. This means that, notwithstanding semantics, the paper employs Barry's (2015) perspective of a continuum based on GLTN (2008).³

4. 'CONTINUUM' THEORY AND METAPHOR IN THE LAND PARLANCE

4.1. UNDERSTANDING PRIMARY AND SECONDARY LAND RIGHTS

Secure land rights are crucial for development at all levels, especially in poverty alleviation or reduction in the majority world. The search for the best approach to securing land tenure to enable people to meet their socio-economic needs through appropriate land use has been the task of land management professionals for a long time. This challenge of securing land rights has urban (including peri-urban) and rural dimensions. Together, these areas face growing demands for land for farming, housing, tourism, property development and commercial investments. In rural areas, land tenure insecurity increases poverty and makes people vulnerable to land grabbing. In the urban areas, the improvement of tenure security in informal settlements is urgently necessary. These areas (rural and urban) are under multiple land-use pressures. These pressures include increasing fragmentation, environmental degradation, land conflicts, land use conversion, soil erosion and nutrient depletion, commercial investments, and natural disasters (GLTN, 2008). Since access to land is a fundamental basis for food security, human shelter, and other socio-economic needs of people in rural and urban areas, the GLTN developed the continuum principle and practice (through its land tool development) in pursuit of secure land access. This involved identifying primary and secondary rights to land and how they relate in terms of their forward and backward transitions.

Primary rights are the original rights people hold on land. Secondary rights are the derived rights to land and natural resources which emerge due to non-definitive transfers of use rights, e.g., rental arrangements, sharecropping or indigenous forms of loans, mortgages, pledges, etc. Secondary rights are widespread throughout the majority world and are very important for poorer groups. Unlike primary land rights, which depend on legal relations, secondary land rights depend on social relations. Hence, they are dynamic, diverse and subject to constant change and evolution.

³ Barry's (2015) work is contributing to the innovation of continuum of land rights produced by GLTN, a network of international partners committed to increasing access to land and tenure security for all, with a particular focus on the poor, women and youth. To know more about the GLTN, visit <u>www.gltn.net</u> 10

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

4.2. BACKWARD-FORWARD LINKAGES AND CONTINUUM OF LAND RIGHTS

Depending on where one resides around the world, various tenure systems exist, giving credence to a range of statutory or formal, religious, customary or indigenous and non-formal tenure categories. Within this structure of broad tenure systems, backward and forward linkages exist, such that where the social legitimacy of one tenure ends may be the beginning of legal legitimacy for another, and vice versa. This structure of linkages between each tenure evokes the idea of a continuum in land management. In explaining the notion of tenure continuum, the GLTN (2015: 7) notes that:

"Most people now live at some point on a continuum, in which they may be the recognised owners of the land; but they have constructed a house in an area that is not designated for residential use, or they may simply have failed to conform initially to official regulations or procedures. Within these categories are others, such as renting land, buildings, rooms or even beds, with or without contracts, but all of which may provide some rights. In India, even pavement dwellers in Mumbai enjoy some legal rights. In some cases, there may be more than one legally acceptable system operating, such as statutory, customary and religious systems (as in Islamic countries)."

The range of possible forms of tenure identified by the GLTN (as mentioned above) can be considered a continuum. According to the GLTN, each continuum provides different rights and degrees of security and responsibility. "Each enables different degrees of enforcement, and across a continuum, different tenure systems may operate, and plots or dwellings within a settlement may change in status, for instance, if informal settlers are granted titles or leases. Migrants from rural areas, where customary tenure predominates, may be acting illegally when obtaining land from friends and relatives in urban centres where only statutory systems are officially accepted" (GLTN, 2008: 8). This structure of land rights is viewed as a continuum because it is a range of linked tenure rights from informal to customary (which retain a sense of legitimacy after being replaced officially by statutory systems) and statutory (Figure 3).

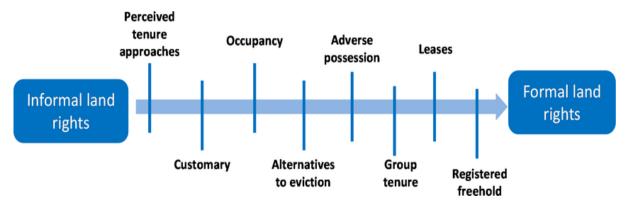


Figure 3: Continuum of land rights (GLTN, 2008: 8)

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

As a continuum, this range of land rights comes with varying degrees of tenure security. Depending on their land rights awareness and socio-economic situation, people tend to opt for informal (or customary) and formal (or statutory) arrangements to access land and housing in areas that would otherwise not be affordable or available. Where, to some extent, recognised customary rights are legitimate, there is a tendency for (in)formal systems of land registration and transactions to emerge. Each form of tenure in this continuum has benefits and limitations in different contexts. For instance:

"Customary systems can meet social and economic needs and, although often not documented, can be very secure. However, commercial pressures and the monetisation of customary land transactions erode the social cohesion that gives customary tenure legitimacy. Public ownership potentially ensures equal access to land for all. However, it often results in bureaucratic inertia, corruption and political patronage in land allocation. Private tenure systems provide the most intense and efficient land use. However, they have not enabled the poor to obtain legal land and shelter (GLTN, 2008: 8).

Based on the preceding, this paper adopts Barry and Augustinus' (2016: v) description of a continuum as theory (as well as a concept) and metaphor for describing "a situation where different tenure forms incorporating a range of concepts, or interests exist simultaneously, often transforming and changing between forms over time.

5. URLLs FROM 'CONTINUUM' THEORY AND METAPHOR DIMENSIONS

What has continuum to do with urban-rural land linkages (URLLs)? Various land tenure types may exist in several possibilities, such as individual ownership and customary interests, or family and customary lineage." Hence, continuum, when viewed as essential land management, helps to stretch the horizon of tenure options capable of benefiting the poor and vulnerable in the schemes of everyday development. From a spatial perspective, it can apply to understanding urban and rural relationships as a spatial development continuum in which several ranges of tenure rights extend.

Rural and urban development depends mainly on the extent of physical access people have to services and job opportunities (Cattaneo et al., 2021/2022). Spatial relations that enable functional spaces promote a continuum in human activities along a continuum of spaces (Chigbu 2013/2021). Insights can be drawn from the central place theory of Christaller (1966), which prescribes central places distinguishable along settlement interconnections that captures the urban-to-rural continuum. This continuum reflects an extended interface between rural and urban areas—instead of as bounded spatial units—as interdependent places of exchanges for socio-economic, socio-spatial, information and environmental development.

The URLLs can be explained using the continuum theory and metaphor (or concept) because land, as a physical object and abstract property, serves as the foundation for these exchanges. Land ownership and exercise of land rights (in terms of land management and administration decisions) serve as the driver of the urban-rural continuum by nurturing the socio-economic 12

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

relationships within adjacent spaces or places of human-and-natural-resource interactions. This scenario becomes even better understood when Christaller's (1933) central place thinking. In this regard, Figure 4—framed using ideas from Christaller, 1933/1966; Boverket, 1994; André, 2009; Chigbu 2013/2021—illustrates the morphology of URLLs as a concept that recognises that territory is functional because of land acting as a driver of activities (including decisions) in a continuum along human settlements from urban areas (main and intermediary cities) to rural settlements (small towns and villages).

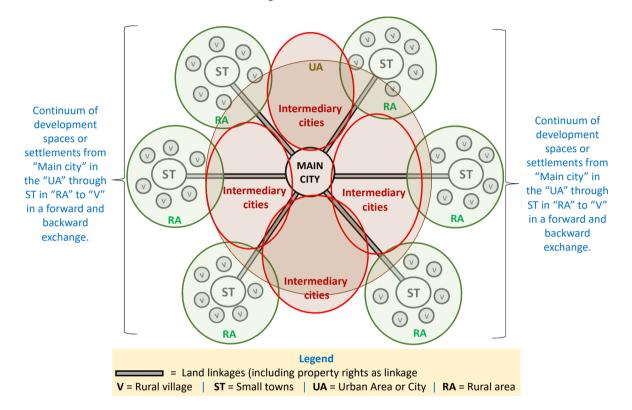


Figure 4: URLLs as continuum of land driven physical and abstract spaces and human activities

This description of URLLs reflects that the rural and urban are not disconnected in space but have very blurred boundaries (social, cultural, physical, economic, political, institutions, information, administrative and territorial). It identifies land as an element in connecting the blurred boundaries. Hence, stretching it into a continuum strengthened by spatial catchment areas (e.g., central places. This continuum is nonlinear as there can sometimes be fractured response (due to spacing, distance, legislations/policies) between spatial catchments or intermediary settlements. A functional continuum allows for flexibility in exchanges driven by spatial development, land policies, land governance, land use, land development, land value and land tenure). Depending on these factors, particularly the development policies, the behaviour of the urban-rural continuum can range from elastic to inelastic responses. The burning question that arises is can the URLLs be facilitated to tap into the continuum as an opportunity for urban-rural interdependent development.

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

6. FACILITATING URLLS IN THE CONTEXT OF URBAN-RURAL DEVELOPMENT

6.1. ADJUSTING STATE OF MIND BY ALL STAKEHOLDERS

The ongoing urban-rural development gaps reflect human states of mind. Magel and Chigbu (2022: 32) note that "the state of the urban-rural divide observed today reflects the state of the minds of those who determine the course of action." It is the function of stakeholders' minds — i.e., decision-makers minds, the jobless and so-called educated people. It is also about the mind of business leaders (especially macroeconomists) who conform to the saying that "the future is urban." According to them (Magel and Chigbu, 2022: 32):

"In the minds of the jobless people who hope for better employment (and income in the cities), it is best to abandon the rural areas and head for the cities. This false hope leads to the growing experience of informal settlement lifestyles (e.g., slum life, shack life, or ghetto life) and urban poverty. It is also in the minds of all those whose thought processes align to only an urban world. These people think only about the urban. They even question why a government should invest money in rural areas with little or no economic returns. They forget a natural reality that a city cannot physically and socioeconomically exist sustainably without the land resources of rural areas. What about the minds of the politicians? Most of them lack an understanding of what rural areas mean to the heritage of their nations. Even the ones that have some knowledge of this often officially fight for the development of liveable rural areas but still support (unconsciously or inconsistently) liberal or wrong development policies that enable big companies (with their thousands of jobs) to site their business only to the metropolitan areas. Over the centuries, this kind of development mindset has led to a downward slope in the development of rural areas."

These states of mind, unfortunately, shape the urban and rural problems. Hence, changing the state of minds in the rural-urban land debate is crucial for fostering URLLs that would foster better continuum gains regarding the shareability of urban-rural advantages in mutually beneficial ways. "Introducing shared urban-rural activities (in terms of jobs, education, energy, recreation, and others) as a matter of intercommunal or regional cooperation should be made policy priorities for urban-rural co-existence and co-development" (Magel and Chigbu, 2022: 33). These should be spatial partnerships based on a principle (and practice) that there is no hierarchy between urban and rural areas and that all areas are dependent on each other. This means aspiring for equivalent living conditions. Doing these things would require changing how we view the urban and rural areas in ideological, philosophical, economic, political, cultural, socially nuanced and idiosyncratic manners.

6.2. (RE)STRUCTURING INSTITUTIONS AND GOVERNANCE

"While the rural-urban continuum owes an intellectual debt to central place theory, which is hierarchical and mechanistic, it allows, in fact, for a variety of power arrangements based on social and institutional relationships and permits a less asymmetrical balance of power with ample room for 'rural agency'" Cattaneo et al. (2021: 12). Coordinating the power dynamics at

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

various spatial scales requires institutional and governance structuring that engenders governance collaborative, mutually beneficial urban-rural relationships (Brown and Shucksmith, 2017). This can contribute to enhanced land and natural resource management and non-land sectors such as education, health and tourism. Land and natural resource governance have their spatial dimension. For instance, Murali et al. (2019) note that most natural resources are in rural areas but consumed in metropolitan areas. Hence, land tenure matters because the ownership and control of the extraction, processing and use of resources must be managed for the mutual benefits of the urban and the rural. This calls for a people-centred and needs-responsive approach to governance of land and natural resource (water, forest, etc.).

6.3. FOOD SYSTEMS AS A LINK BETWEEN URBAN AND RURAL AREAS

Food systems are directly linked to land use and land tenure. In the majority world, the livelihoods of rural populations depend on their connection to urban, vice versa. Cities depend on their surrounding peri-urban and rural areas for food and ecosystem services. Cattaneo et al. (2021: 3) noted the findings of FAO (2017) and Proctor and Berdegué (2020) that:

Agriculture in the proximity of urban centres is often flourishing through more intensive production of high-value crops and direct marketing. For a rural location, the size of nearby urban centres will affect opportunities for agricultural producers. Market access is more difficult for smallholders in countries with a greater urban concentration in a few cities. At the same time, it is easier in countries with more towns and small and medium cities. City–region food systems prove that food issues are not easily circumscribed within convenient, static boundaries. However, they must instead be addressed from a larger regional or territorial perspective, encompassing urban/peri-urban and rural spaces and multiple jurisdictions in which food systems operate.

URLs that foster strong URLLs will produce the urban-rural continuum that will demand policy makers to consider cross-border resource mapping when allocating resources or designing programs meant to tackle food security and poverty between urban and rural areas.

6.4 RECOGNISING THAT TERRITORY AND LOCATION MATTER

Different from the traditional dichotomous roles of land (and land management) in urban and rural development as separate concerns, facilitating URLLs will enable a simultaneous development approach in the context of the urban-rural continuum in development. This means that land (and its associated development policies) would be framed to engender socioeconomic relationships within and between urban and rural settlements. This means that both individual and territorial places should matter because of their multi-scalar settlement system and dynamics that merges nodal activities with inter-nodal flows of resources, information and people (Massey, 1994; Cattaneo et al., 2021). It also means that socio-economic relationships must extend beyond the physical, cultural, administrative, and political boundaries. This is crucial because urban and rural problems can manifest in the same or different ways. For instance, it has been found that poverty is more widespread and deeper in rural small towns

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

than in very large cities, generally due to a lack of access to essential infrastructure services such as water, sanitation and electricity (Ferré et al., 2012). Vandercasteelen et al. (2018) assert that location matters in the organisation of spatial relations. Cattaneo et al. (2021: 3) note, "Small towns located near major urban centres may experience lower poverty rates while those in remote areas are poorer. City size may also affect nonfarm employment opportunities, farm incomes, and agricultural-input use in proximate rural areas." Diao et al. (2019) in Cattaneo et al. (2021: 3) "find that proximity to larger cities is associated with a lower probability of being poor and a higher probability of households engaging solely in rural nonfarm employment."

7. CONCLUSION AND THE WAY FORWARD

This paper draws from the messages from two major GLTN publications. The first is Barry's (2015) *Property theory, metaphors and the continuum of land rights.* The second is Chigbu's (2021) *urban-rural land linkages: a concept and framework for action.* This paper uses the first to explain the latter to draw a policy message highlighting URLLs' functionality in achieving interdependent urban-rural development. The only deviation in drawing from Barry's (2015) literature is that the view of 'continuum' from the perspective of both theory and metaphor. As part of the review, the works of Cattaneo et al. (2021) and Chigbu (2013) allowed for stretching the discourse by emphasising the bidirectional impact of the rural-urban continuum and the role of land in facilitating the continuum.

Going forward, this paper adds to the call on directions to shift the discussion on development policy towards a more territorial perspective that accounts for interlinkages between urban and rural areas based on their land-related needs, challenges and opportunities. This requires a framework for addressing URLLs based on the need for the urban-rural development continuum. This suggestion is based on the premise that "land interventions do not exist in isolation, but rather operate along a continuum of national-local development agendas (Chigbu, 2021: 30). Such a URLLs framework should consist of activities embedded in a development plan, vision or agenda on land. For details concerning utilising URLLs as a means for urbanrural continuum development, please refer to (Chigbu, 2021). Important within such a framework is the issue of vision. A vision should form the starting point for a URLLs framework. This vision must recognise that land access and land use should be administered in ways that create interdependent effects in both urban and rural. Concerning context, the vision for urban-rural continuum (or interdependent) development should be contextualised to motivate the innovation of strategies to support land sector reforms, capacity building and other action-oriented steps towards enhanced URLLs. Since urban-rural interdependency is a key objective of URLLs, "a strategy would be to use land tools, capacity building measures and sector reforms (or any locally possible measures) to engage in cross-jurisdiction (or continuum activities) that would enable land laws, policies, practices and programmes to generate land management and administration outcomes on the continuum of development" (Chigbu, 2021: 32). When appropriately implemented through action-oriented steps, an impact would be an urban and rural development that are interdependent.

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

REFERENCES

- André, D. (2009). *Polycentrism in national spatial plans in Europe –towards a common spatial vision?* MSc thesis, Blekinge Institute of Technology: Sweden.
- Archer, J. (1983). Rus in Urbe: Classical Ideals of Country and City in British Town Planning. *Studies in Eighteenth-Century Culture*, 12(1), pp. 159-186.
- Asogwa, N.U. and Onwuama, M.E. (2022). Who gets what? Assessing the reincarnation debate. *HTS Teologiese Studies/Theological Studies*, 78(3), p. 8.
- Barry, M. (2015). *Property theory, metaphors and the continuum of land rights*. UN-Habitat / Global Land Tool Network: Nairobi, Kenya. <u>https://gltn.net/download/property-theory-metaphors-and-the-continuum-of-land-rights/</u>
- Barry, M. and Augustinus, C. (2016). Framework for evaluating continuum of land rights scenarios. Global Land Tool Network / UN-Habitat.
- Becker, H. (2008). Urbs, oppidum, castellum, vicus: settlement differentiation and landscape nomenclature in Etruria. La Città Murata in Etruria. Atti del XXV Convegno di Studi Etruschi ed Italici. Chianciano Terme. Sarteano. *Chius*i, 30, pp. 73-80.
- Board, M. (1989). Examination of the use of continuum versus discontinuum models for design and performance assessment for the Yucca Mountain site. The United States Nuclear Regulatory Commission: Washington, DC. <u>https://doi.org/10.2172/137516</u>
- Boverket. (1994). Sverige 2009: Förslag Till Vision. Karlskrona: Boverket.
- Brown, D.L. and Shucksmith, M. (2017). Reconsidering Territorial Governance to Account for Enhanced Rural-Urban Interdependence in America. *The ANNALS of the American Academy of Political and Social Science*, 672(1), pp. 282–301. <u>https://doi.org/10.1177/0002716217706495</u>
- Cattaneo, A., Adukia, A., Brown, D.L., Christiaensen, L., Evans, D.K., Haakenstad, A., McMenomy, T., Partridge, M., Vaz, S. and Weiss, D. J. (2021). *Economic and Social Development along the Urban-Rural Continuum: New Opportunities to Inform Policy*. World Bank, Washington, DC. Policy Research Working Paper 9756. <u>https://documents.worldbank.org/en/publication/documents-</u> <u>reports/documentdetail/460501629739802690/economic-and-social-development-along-</u> the-urban-rural-continuum-new-opportunities-to-inform-policy
- Cattaneo, A., Adukia, A., Brown, D.L., Christiaensen, L., Evans, D.K., Haakenstad, A., McMenomy, T., Partridge, M., Vaz, S. and Weiss, D.J. (2022). Economic and social development along the urban–rural continuum: new opportunities to inform policy. *World Development*, 157, p. 105941.
- Charatonik, J.J. (1998). *History of Continuum Theory*. In Aull, C.E., Lowen, R. (eds) Handbook of the History of General Topology. History of Topology, vol 2. Springer, Dordrecht. https://doi.org/10.1007/978-94-017-1756-4_11
- Chigbu, U.E. (2013). Territorial development: Suggestions for a new approach to rural development in Nigeria. PhD thesis, Technische Universitaät München, Germany. http://mediatum.ub.tum.de/node?id=1136728

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

- Chigbu, U.E. (2021). Urban-rural land linkages: a concept and framework for action. UN-Habitat / Global Land Tool Network: Nairobi, Kenya. <u>https://gltn.net/download/urban-</u> rural-land-linkages-a-concept-and-framework-for-action/
- Chigbu, U.E., Mabakeng, M.R. and Chilombo, A. (2021). *Strengthening Tenure and Resource Rights for Land Restoration*. UNCCD Global Land Outlook Working Paper. Bonn. <u>https://www.unccd.int/resources/global-land-outlook/strengthening-tenure-and-resource-rights-land-restoration</u>
- Christaller, W. (1933). Grundsätzliches zu einer Neugliederung des Deutschen Reiches und seiner Verwaltungsbezirke. *Geographische Wochenschrift*, 1, pp. 913-919.
- Christaller, W. (1966). *Central places in southern Germany*. Prentice Hall: United States of America.
- Cyriac, S. (2022). Dichotomous classification and implications in spatial planning: A case of the Rural-Urban Continuum settlements of Kerala, India. *Land Use Policy*, 114, p. 105992.
- de Souza, J.P., and Bazant, M.Z. (2020). Continuum theory of electrostatic correlations at charged surfaces. *The Journal of Physical Chemistry C*, 124(21), pp. 11414-11421.
- Diao, X., Magalhaes, E., & Silver, J. (2019). Cities and rural transformation: A spatial analysis of rural livelihoods in Ghana. *World Development*, 121, pp. 141–157. https://doi.org/10.1016/j.worlddev.2019.05.001
- Enrigen, C.A. (1992). Continuum theory of microstretch liquid crystals. *Journal of Mathematical Physics*, 33, p. 4078. <u>https://doi.org/10.1063/1.529859</u>
- Eringen, A.C., and Ingram, J.D. (1965). A continuum theory of chemically reacting media—I. *International Journal of Engineering Science*, 3(2), pp. 197-212.
- FAO. (2017). *The State of Food and Agriculture 2017: Leveraging food Systems for inclusive rural transformation.* FAO: Rome. <u>http://www.fao.org/3/a-i7658e.pdf</u>
- Ferré, C., Ferreira, F. and Lanjouw, P. (2012). Is there a metropolitan bias? The relationship between poverty and city size in a selection of developing countries. *World Bank Economic Review*, 26(3), pp. 351–382.
- Forster, T., Egal, F., Romero Mera, C.A. and Escudero, A.G. (2021). *Urban–Rural Linkages and Ecosystem Restoration*. UNCCD Global Land Outlook Working Paper. Bonn. <u>https://www.unccd.int/resources/global-land-outlook/urban-rural-linkages-and-</u> ecosystem-restoration
- Galen, G.C., Aguirre, B.A. and Tirpak, J.W. (2022). Finding a Dialectical Balance Between Process and Procedure. *Pragmatic Case Studies in Psychotherapy*, 18(1), pp. 94-101.
- Global Land Tool Network (GLTN). (2008). Secure Land Rights for All. Nairobi: Global Land Tool Network / UN-Habitat: Nairobi. https://unhabitat.org/secure-land-rights-for-all
- Leslie, F.M. (1992). Continuum theory for nematic liquid crystals. *Continuum Mechanics and Thermodynamics*, 4(3), pp. 167-175.
- Liu, S., Tong, H. and Fang, K. (2022). Optomechanical crystal with bound states in the continuum. *Nature Communications*, 13(1), pp. 1-7.
- Magel, H. and Chigbu, U.E. (2022). Urban-rural land linkages and territorial justice as states of mind. *GeoConnexion International Magazine*, 21 (2), pp. 32-33. https://flickread.com/edition/html/62cfed13f2c39#1

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

Volunteering for the future - Geospatial excellence for a better living Warsaw, Poland, 11–15 September 2022

- Massey, D. (1994). *Space, Place, and Gender (NED-New edition)*. University of Minnesota Press: United States of America. <u>https://www.jstor.org/stable/10.5749/j.cttttw2z</u>
- Mullin, R.L. (1967). *The Use of the Terms' Rus and Urbs' in the Poetry of Horace*. Dissertation. University of Washington: United States.
- Murali, R., Suryawanshi, K., Redpath, S., Nagendra, H. and Mishra, C. (2019). Changing use of ecosystem services along a rural-urban continuum in the Indian Trans-Himalayas. *Ecosystem Services*, 40, 101030. <u>https://doi.org/10.1016/j.ecoser.2019.101030</u>
- Parra, M.O. and Proctor, P. (2022). The Translanguaging Pedagogies Continuum. *Journal of Education*, p. 00220574211053587.
- Proctor, F.J. and Berdegué, J.A. (2020). Food systems at the rural–urban interface. In Crush, J., Frayne, B. and Haysom, G. (Eds.), *Handbook on urban food security in the global south* (p. 432). Edward Elgar Publishing: Cheltenham, United Kingdom.
- Rickardsson, J. (2021). The urban-rural divide in radical right populist support: the role of resident's characteristics, urbanisation trends and public service supply. *The Annals of Regional Science*, 67(1), pp. 211-242.
- Sahu, B.K. (2019). Rural-Urban Linkages and Local Growth Motors: A study of Nonfarm Activities in Odisha. *Pathways for Changing Rural Landscape*, 49(1-2), p. 157.
- Samples, J. (2017). *Topics in Continuum Theory*. MSc thesis. University of Washington: Seattle, United States of America. <u>http://hdl.handle.net/1773/40931</u>
- Telezhko, G.M. (2022). Research on the Structure of Indo-European Dialect Continuum by Comparing Swadesh Lists of the Closest Descendant Languages. *Linguistics*, 8(2), pp. 124-157.
- UN-Habitat. (2019). Urban-Rural Linkages: Guiding Principles Framework for Action to Advance Integrated Territorial Development. UN-Habitat: Nairobi.
- Qu, X.Y., Tong, H., and Zhang, S.Q. (2022). Canonical states in relativistic continuum theory with the Green's function method: Neutrons in continuum of zirconium giant-halo nuclei. *Physical Review C*, 105(1), p. 014326.
- Vandercasteelen, J., Beyene, S.T., Minten, B. and Swinnen, J. (2018). Big cities, small towns, and poor farmers: Evidence from Ethiopia. *World Development*, 106, pp. 393–406. https://doi.org/10.1016/j.worlddev.2018.03.006
- Zhu, S., Yu, C., and He, C. (2020). Export structures, income inequality and urban-rural divide in China. *Applied Geography*, 115, p. 102150.

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)

BIOGRAPHICAL NOTES

Prof. Dr.-Ing. Uchendu Eugene Chigbu



Uchendu Eugene CHIGBU is Associate Professor. His works fall within the interface between Social Sciences and Geodesy (or Social Geodesy). He serves on the Editorial Boards of the journals Land Use Policy (Elsevier) and Local Development & Society (Routledge). His most recent book, "Land Governance and Gender: The Tenure–Gender Nexus in Land Management and Land Policy" was published in 2022.

CONTACTS

Namibia University of Science and Technology, 13 Jackson Kaujeua Street, Private Bag 13388, Windhoek, Namibia. Tel.: +264 61 207 2470 | Fax: +264 61 207 9470 | Email: <u>echigbu@nust.na</u> | Websites: <u>www.nust.na</u>

Urban-Rural Land Linkages: Concept Explained Using 'continuum' Theory and Metaphor (11762) Uchendu Eugene Chigbu (Namibia)