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# Topology and "In-Between Spaces" of Security-Oriented University Campus Cities in Ethiopia

(エチオピアのセキュリティ重視型大学キャンパスにおけるトポロジーと地域との境界空間のあり方)

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This dissertation, titled **Topology and "In-Between Spaces" of Security-Oriented University Campus Cities in Ethiopia**, clarifies the formation of Security-oriented university campuses, the spatial planning of campus neighborhoods, location characteristics, and the In-between spaces: the nexus between the campus's inner edges and the immediate public urban space outside the campus precinct.

Chapter 1 [Research Introduction] covers the research's relevance, methodology, and background information about Ethiopian university campuses. International studies recognize the reciprocal relationship in which universities contribute beyond their original academic mission by making their spaces accessible to the public and impacting city's spatial structure. However, due to socioeconomic conditions, certain university campuses, such as those in Ethiopia, use boundary enclosures and security checkpoints that restrict the number of visitors, defined as Security-oriented campuses. Therefore, there are regions where opening the campus is not an option for now. Furthermore, as Ethiopia and other nations rapidly urbanize and expand large-scale university campuses, the dichotomy between campus and urban environment is becoming more prominent. As case studies, 67 and 11 extracted Ethiopian public university

campuses were chosen. A qualitative method was employed by utilizing data from literature reviews, web-based surveys, discussions with campus planning decision-makers, and field surveys.

Chapter 2 [Evolution of campus planning in Ethiopia: Historical Perspective and Political Influence] clarifies the historical evolution of campus planning in Ethiopia since the establishment of the first post-World War II university in 1950. It explores the spatial distribution and planning strategies employed during three political periods: Imperialist, Socialist or Marxist-Leninist, and Federal Democratic. The evolution illustrates the transition from urban campuses aligned with city development and located along major city development axis, to rural campuses. In the 1950s and 1960s, post-colonial modernization strategies prioritized the conversion and adaptive reuse of existing camps and facilities that used to be occupied by the Italians, thereby expediting the admissions process in an efficient manner. During the Socialist period, the government focused on establishing institutions that met the socio-economic needs of the nation, considering the relevance of program focus and available resources in the hosting city. In 1997, a higher education strategy was developed to promote economic growth, education accessibility, and poverty reduction. It accelerated the growth of university campuses by distributing campuses throughout urban and rural areas, seeking to promote educational equity and national economic growth.

Chapter 3 [Topological Analysis of Campus-City Through Site Selections and the Spatial Planning of Campus Neighborhoods] examines the spatial relationship between campuses and their host cities to understand the extant physical campus-city interaction or disassociation by analyzing the dynamics and interdependencies of these entities. Based on the physical topology of the 67 campuses within their hosting cities, six campus-city topologies were identified according to the campus's proximity to the city: Enclosed to Detached. Later, 11 samples were selected from the 67 universities to examine each topology's pre-establishment location characteristics, spatial planning, and identification of spatial interaction methods used by Security-oriented campuses, depending on their geographic location. By identifying three types of campus locations and physical planning reasons (Adaptive reuse or conversion, Resource-based or Need-based, and Economic-based), the chapter offers insights into the factors influencing campus site selection and distribution. It is highlighted that even though campus accessibility is minimal, a few closed campuses have found ways to allow visitors to use certain campus facilities, especially for campuses in close proximity to the city that have historical buildings within or next to them.

Chapter 4 [Spatial characteristics and utilizing the campus-city In-between space] identifies the characteristics of In-between spaces and examines them based on the planning of campus edges, boundary walls, and utilization of the In-between spaces. By analyzing the design elements, street functions, and neighborhood functions within the In-between spaces, the chapter emphasizes how this area can facilitate interaction between the campus and outside communities, enhancing the campus-city relationship. It discusses how campus site configurations, based on the main determinates of urban streets, influence the location of entrances and functional accessibility of the campus zones. It highlights how the main gate design often reflects local culture, history, or architecture, establishing a legible identity for the

place, which is also reflected on the boundary wall. Moreover, the six types of campus-city In-between spaces are identified, each offering different characteristics, such as visually permeable boundaries and green corridors for activities to emerge.

Finally, in Chapter 5 [Conclusions and recommendations], the key findings from the research are summarized, emphasizing the importance of studying Security-oriented campuses planning to enhance the connection between campuses and their surrounding cities. The chapter provides valuable recommendations for design interventions, community integration, activity generation, and image and identity improvement, recognizing and addressing the obstacles that need to be overcome. These recommendations are crucial for implementing effective strategies on current and future campuses, fostering a stronger campus-city relationship that benefits both the university and the surrounding urban environment.

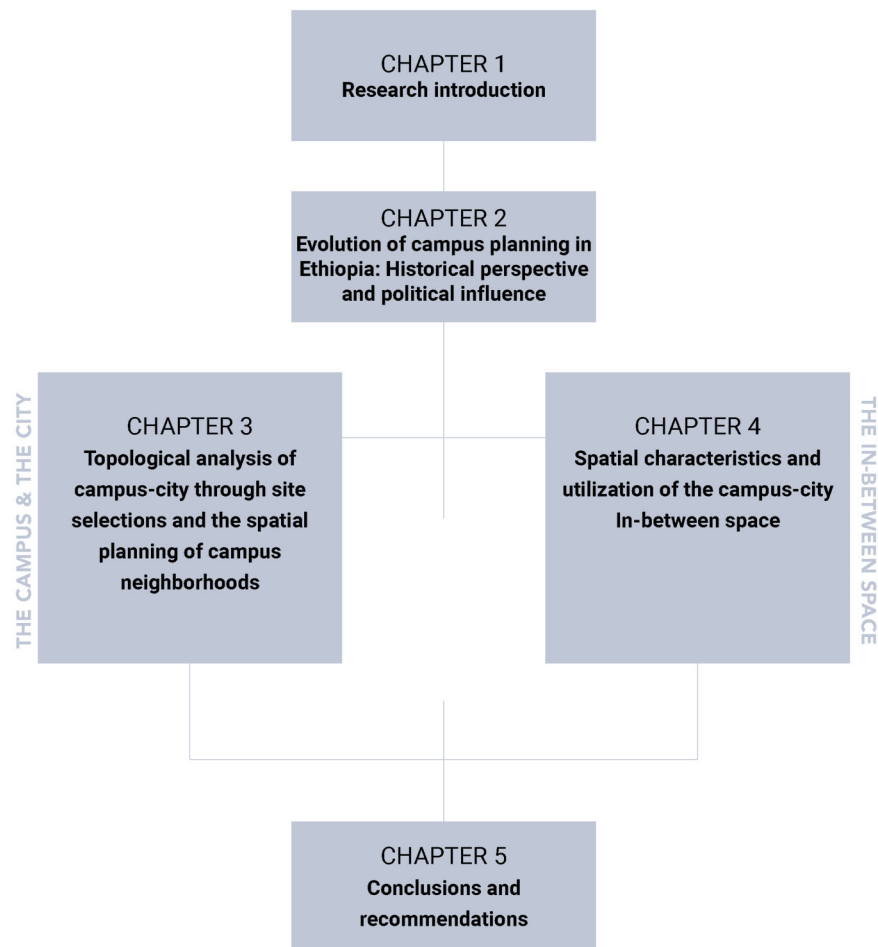


Figure: Dissertation structure