Stitching Together
Unity and Mobility for Shkoza

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Abstract - *Tirana's rapid urban growth over the last century has brought about significant challenges, including traffic congestion, limited mobility, and unequal access to public resources. This study introduces a bold urban transformation: creating a new boulevard along the Tirana River while reimagining Shkoza as a vibrant urban hub. Drawing inspiration from the city's 1921 development map and the urban planning insights of Camillo Sitte and Kevin Lynch, the proposal focuses on decentralizing activity, enhancing connectivity, and encouraging sustainable mobility.*

The envisioned boulevard, running parallel to Tirana's main artery, aims to ease traffic, link peripheral neighborhoods, and breathe life into underutilized spaces. Meanwhile, Shkoza is planned as a thriving new urban center, featuring public plazas, mixed-use areas, and eco-friendly infrastructure. The design is shaped by careful analysis of the city's morphology, including plazas, roads, and the Tirana River, ensuring the project balances functionality, aesthetics, and sustainability.

To complement this vision, an izohypse (contour line) analysis has been conducted to evaluate the terrain's potential for development. This analysis identifies opportunities for efficient construction, natural flood mitigation, and the creation of green buffers. By addressing these factors, the project aims to reduce traffic congestion on critical routes like Rruga e Elbasanit and Rruga Kavajës while strengthening connections across the metropolitan area.

By bridging the gaps in Tirana's urban fabric, this intervention leverages the city's natural and built environments to create a more resilient and human-centered future. It offers a roadmap for balanced growth, enhanced mobility, and an improved quality of life, presenting a forward-thinking vision for Tirana's development.

Keywords - Traffic congestion, morphological analysis, urban center, development

Introduction

The capital city of Albania, Tirana, has undergone rapid and often unstructured urban expansion over the past three decades, particularly following the socio-political transformations of the early 1990s. This accelerated growth has substantially altered the city's spatial configuration, demographic distribution, and functional organization. One of the most visible consequences of this expansion has been the intensification of vehicular traffic and the persistent congestion of key urban corridors. Increasing traffic volumes have not only extended commuting times and reduced overall urban accessibility but have also exacerbated environmental pressures, including elevated levels of air pollution, noise pollution, and greenhouse gas emissions. These dynamics collectively undermine urban liveability and pose significant challenges to sustainable development.

The concentration of activities within a historically centralized urban core has reinforced a monocentric spatial structure, generating radial mobility patterns that funnel daily movements toward a limited number of primary axes. This spatial imbalance has produced recurring bottlenecks and a structural dependency on a few critical infrastructural corridors. Addressing these challenges requires a strategic rethinking of Tirana's urban form, moving beyond short-term traffic management solutions toward systemic spatial interventions capable of redistributing flows, activities, and opportunities across the metropolitan territory. Within this framework, the establishment of a new urban center emerges as a viable strategy for decentralizing economic, social, and administrative functions from the congested city core. By introducing a complementary pole of activity, the proposed intervention seeks to foster polycentric development, reduce pressure on existing infrastructures, and restructure mobility patterns in a more distributed and resilient manner. The reconfiguration of traffic flows through contemporary infrastructural integration including multimodal transport systems, improved public transit connectivity, and pedestrian-oriented design would aim not merely to alleviate congestion, but to enhance urban accessibility, spatial equity, and environmental performance. In this sense, the project aspires to serve as a model for sustainable urban mobility and forward-looking urban planning practices in rapidly transforming cities. The conceptual foundation of this proposal draws inspiration from the 1921 urban map of Tirana, which illustrates the early stages of the city's planned development. During this formative period, Tirana began consolidating around its principal boulevard, which functioned as both a spatial organizer and a symbolic axis of civic life. Over time, this boulevard evolved into a central spine accommodating administrative institutions, commercial activities, and cultural functions, thereby reinforcing the city's monocentric structure. While historically effective in shaping urban identity and coherence, the boulevard's increasing functional load has rendered it vulnerable to congestion and spatial saturation in the context of contemporary growth pressures. In response to these structural constraints, this paper proposes the construction of a new boulevard extending across the Tirana River and the strategic establishment of a secondary urban center in the area of Shkoza. This intervention seeks to reinterpret the historical logic of axial development while adapting it to present-day requirements for connectivity, decentralization, and sustainable mobility. By extending the city's spatial framework eastward and integrating underutilized territories into the urban network, the proposed boulevard would not only redistribute traffic flows but also stimulate new patterns of development and socio-economic activity. Ultimately, the project envisions a transition from a congested monocentric model toward a more balanced and polycentric urban configuration, capable of accommodating future growth while enhancing environmental quality and urban resilience.

Literature review

The theoretical underpinnings of the proposed intervention in Shkoza are informed by classical urban theory, particularly the work of Camillo Sitte and Kevin Lynch, whose conceptualizations of spatial organization, urban form, and perceptual structure remain highly relevant to contemporary planning discourse. In The Art of Building Cities (originally published in 1889), Camillo Sitte offers a critical reflection on nineteenth-century urban planning practices, emphasizing the importance of spatial composition, enclosure, and the experiential qualities of public space (Sitte, 1889/1945). Rather than privileging purely geometric or traffic-engineered solutions, Sitte argues for the design of squares, crossroads, and public nodes that are proportionate, human-scaled, and spatially articulated to foster social interaction and civic life. For Sitte, intersections and plazas are not merely points of circulation but places of encounter structured voids that organize movement while simultaneously generating urban identity. He critiques overly linear and rigid boulevard systems that prioritize vehicular efficiency at the expense of spatial richness, advocating instead for articulated nodes and carefully composed junctions that mediate flows and create meaningful urban experiences. This theoretical perspective aligns closely with the present proposal to transform Shkoza into a new urban hub. The intention is not solely to construct an infrastructural corridor across the Tirana River, but to embed within it a sequence of articulated nodes boulevard intersections, public squares, and mixed-use focal points that redistribute movement and activity in a deliberate and spatially coherent manner. In this sense, the intervention seeks to reinterpret the boulevard not as a traffic conduit

alone, but as an organizing civic spine capable of structuring a polycentric urban configuration. By dispersing activities away from the overloaded historic core and creating well-designed junctions along the new axis, the proposal echoes Sitte's call for cities composed of interconnected, human-centered urban hubs rather than monotonous, congestion-prone linear systems. Complementing Sitte's spatial theory, Kevin Lynch's seminal work The Image of the City (1960) provides a cognitive and perceptual framework for understanding how individuals navigate and internalize urban environments. Lynch identifies five key elements that structure the mental image of the city: paths, edges, districts, nodes, and landmarks (Lynch, 1960). Paths represent channels of movement; nodes are strategic focal points of convergence; edges define boundaries; districts are medium-to-large sections with recognizable character; and landmarks serve as visual reference points that anchor orientation and identity. According to Lynch, legibility the ease with which the urban environment can be read and understood is fundamental to a city's functionality and psychological comfort. The proposed boulevard along the Tirana River can be interpreted through Lynch's framework as a primary path an organizing linear element that connects peripheral territories to the broader metropolitan transport network. By integrating this new axis into existing mobility infrastructures, including arterial roads and potential public transport corridors, the project reinforces spatial continuity while relieving pressure from the historic center. Simultaneously, Shkoza is conceptualized as a node in Lynchian terms: a strategic point of convergence where movement intensifies and urban activity coalesces. Rather than functioning as a peripheral appendage, Shkoza would assume the role of an identifiable urban center, structured around accessible public spaces, mixed-use development, and multimodal connectivity. Furthermore, the deliberate introduction of architectural and landscape landmarks along the boulevard and within Shkoza strengthens the area's legibility and symbolic presence within the metropolitan structure. These landmarks whether civic buildings, cultural facilities, or spatially distinctive public spaces would provide visual anchors that contribute to orientation, identity formation, and a sense of place. In doing so, the intervention addresses not only the functional redistribution of traffic flows but also the perceptual reconfiguration of Tirana's urban image. By synthesizing Sitte's emphasis on spatial composition and civic nodes with Lynch's framework of urban legibility and structural clarity, the proposal positions Shkoza as both a spatial and cognitive rebalancing mechanism within Tirana's evolving urban system. The new boulevard and its associated urban center thus operate at multiple scales: mitigating congestion through decentralized activity patterns, enhancing environmental and mobility performance, and reinforcing a coherent and imageable metropolitan structure.

Tools and Methodology

This research advances a multidimensional planning framework that positions Shkoza as a prospective secondary urban center capable of addressing

Fig 1 / Existing context- source/ authors

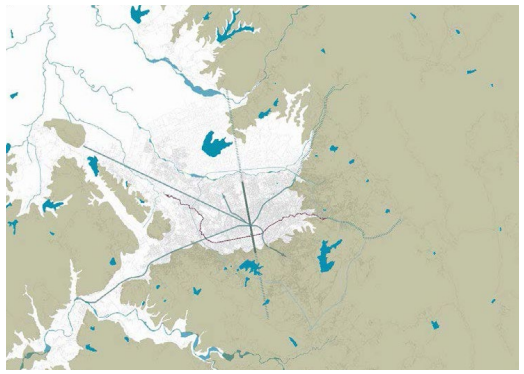


Fig 2 / Existing context- source/ authors

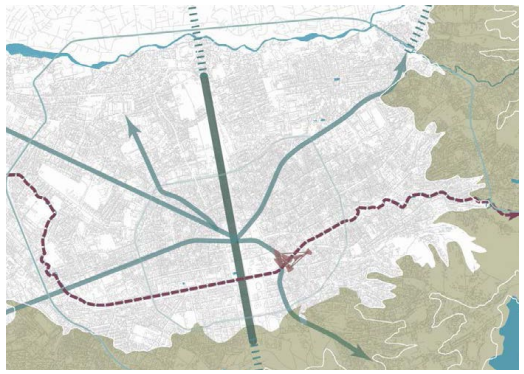


Fig 3 / main city structure- source/ authors

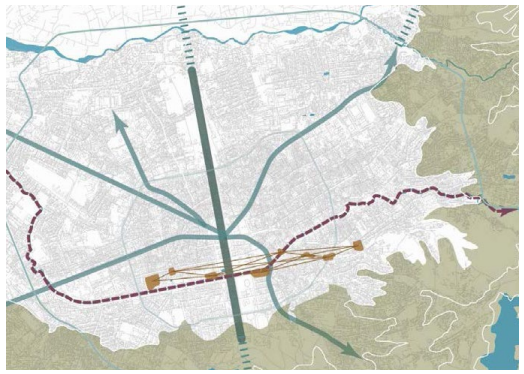


Fig 4 / concept- source/ authors

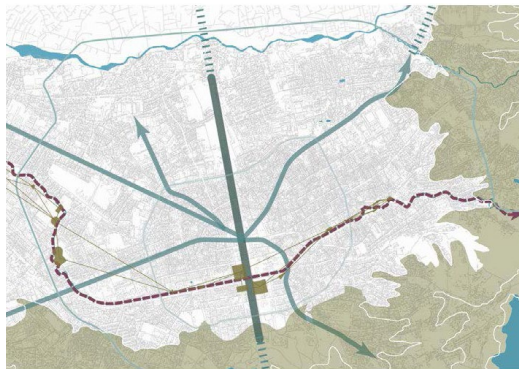


Fig 5 / concept- source/ author

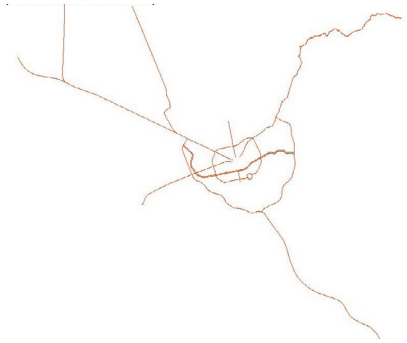


Fig 6 / Existing context- source/ authors

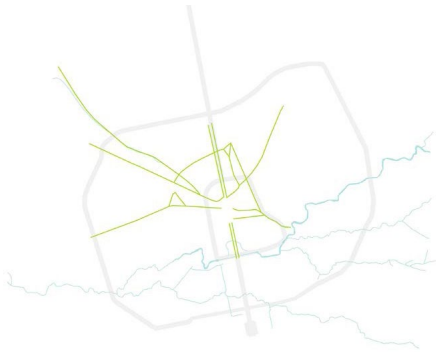


Fig 7 / Existing context- source/ authors

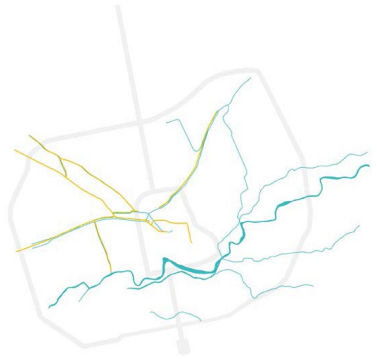


Fig 8 / Existing context- source/ authors

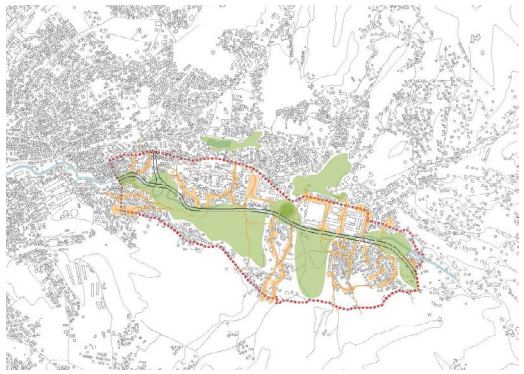


Fig 9 / open spaces- source/ authors

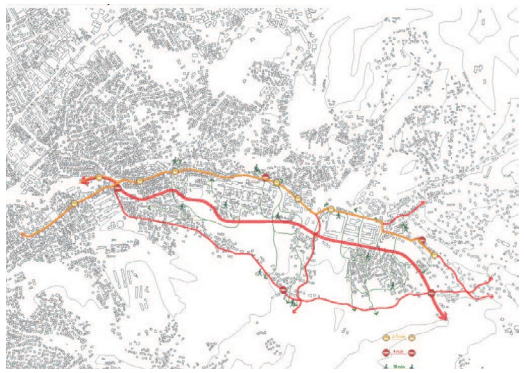


Fig 10 / the site- source/ authors

both spatial fragmentation and traffic congestion in Tirana. Rather than approaching mobility as an isolated technical issue, the study integrates morphological, topographical, and infrastructural analyses in order to understand the structural drivers of congestion and uneven urban development.

The investigation commenced with a systematic morphological assessment of Tirana's contemporary urban fabric. Morphological analysis enables the interpretation of the spatial logic underlying street networks, block structures, density patterns, and land-use distribution. By examining the configuration of road hierarchies, intersection intensities, and functional clustering, the study identified the spatial relationships between built form and mobility flows. This approach revealed that traffic congestion in Tirana is closely linked to the concentration of urban functions along dominant corridors and within a historically centralized core, resulting in radial pressure on a limited number of arterial routes.

Through spatial mapping and field observation, several high-traffic nodes and potential intervention areas were identified. Particular attention was given to the structural role of roadways, intersections, and land-use patterns in shaping daily movement. The analysis demonstrated that the imbalance between residential expansion and employment or service distribution contributes to directional commuting patterns that overload specific infrastructural axes—especially those connecting peripheral neighborhoods to the central core.

The morphological assessment further revealed the coexistence of four distinct development typologies within and around the Shkoza area:
a) Planned block-based residential areas, characterized by relatively regular street grids, defined building alignments, and higher infrastructural coherence.
b) Unplanned and spontaneous residential zones, emerging primarily during the post-socialist transition, marked by irregular parcelization, limited infrastructural hierarchy, and fragmented connectivity.
c) Industrial zones, comprising logistics facilities, warehouses, and production spaces, often spatially segregated yet strategically located along mobility corridors.
d) Rural and peri-urban areas, consisting of dispersed housing patterns interwoven with agricultural land and open landscapes.

The coexistence of these typologies reflects Tirana's layered and often discontinuous urbanization process. The proposed urban hub in Shkoza is therefore conceived as a mediating structure—an integrative node that bridges formal and informal settlements, industrial territories, and rural landscapes. Rather than reinforcing spatial segregation, the project aspires to establish connective infrastructure and mixed-use development capable of fostering functional interdependence and balanced metropolitan growth.

Topographical analysis, conducted through an izohipse (contour-line) study, further clarified the spatial potential of the area. The findings indicate that territories located beyond the Unaza e Madhe (Tirana's Big Ring Road) exhibit flatter terrain, which has facilitated higher-density development due to reduced construction constraints and improved infrastructural feasibility. This geographic condition has encouraged concentrated growth patterns

outside the ring road, increasing population density and intensifying mobility demand along Shkoza's primary access routes. As a result, mitigating traffic along Shkoza's major corridor becomes a critical strategic priority within the broader urban restructuring framework.
In response to these findings, the research proposes a series of coordinated mobility interventions:

(1) Establishment of New Access Points to Unaza e Madhe
The creation of strategically positioned new exits connecting the proposed urban center directly to the Big Ring Road would redistribute traffic flows and reduce dependency on existing overloaded routes. These access points would enhance permeability, facilitate direct connectivity, and prevent congestion from concentrating along a single arterial spine. By integrating the new center into Tirana's primary mobility infrastructure, this intervention strengthens its role as a structurally embedded node within the metropolitan network.

(2) Integration and Upgrading of Secondary Routes
A complementary strategy involves identifying underutilized secondary roads and upgrading them to form an auxiliary network that connects Shkoza with adjacent neighborhoods and the wider metropolitan territory. Strengthening this fine-grained network would create alternative mobility options, alleviate pressure on main corridors, and promote distributed traffic patterns. This hierarchical diversification of the road system aligns with principles of resilient urban mobility, where redundancy enhances overall system performance.

(3) Comprehensive Network Connectivity
Ensuring that the new urban core is seamlessly integrated into the broader road hierarchy is essential for balanced spatial development. This includes coordinating arterial, collector, and local streets; incorporating multimodal transport solutions; and improving pedestrian and cycling infrastructure. By embedding the new center within the city's overall mobility matrix, the intervention supports equitable access, reduces travel distances, and encourages functional decentralization.
Beyond infrastructural reconfiguration, the proposal also identifies significant potential for urban regeneration through the adaptive reuse of the former industrial Uzina site. International precedents demonstrate how obsolete industrial territories can be transformed into dynamic mixed-use districts that catalyze economic revitalization and social activation. The regeneration of Germany's Ruhr industrial region and the redevelopment of Milan's Bovisa district exemplify how industrial restructuring can produce innovation clusters, cultural hubs, and high-quality public spaces. Drawing on such models, the redevelopment of Uzina could anchor Shkoza's transformation, integrating productive activities, housing, services, and public amenities within a cohesive urban framework.

Taken together, this integrated methodology combining morphological analysis, topographical evaluation, traffic assessment, and strategic infrastructural planning provides a robust foundation for reconfiguring Shkoza as a secondary urban center. The approach acknowledges Tirana's distinctive spatial conditions while addressing structural imbalances in mobility and development. By redistributing density, diversifying access points, and fostering polycentric growth, the proposed intervention aspires to mitigate congestion, enhance spatial coherence, and promote a more resilient and sustainable metropolitan structure.

Fig 11 / Functions- source/ authors

Fig 12 / Palimsest- source/ authors

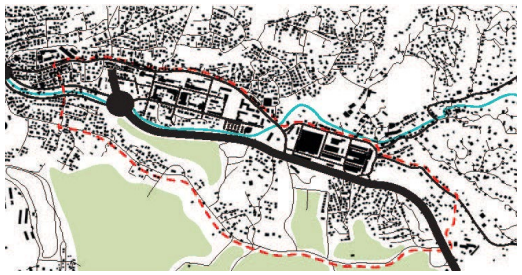
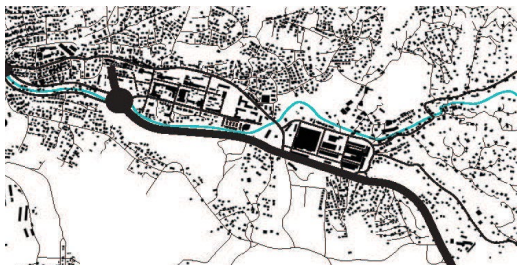


Fig 13 / site area- source/ authors



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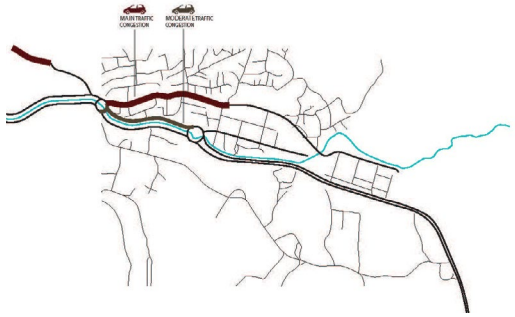

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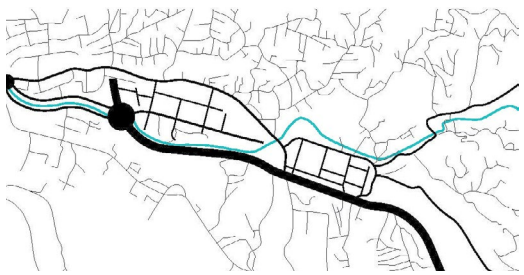

Fig 16 / Concept- source/ authors

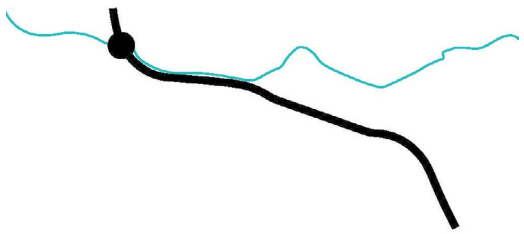

Fig 17 / Main road- source/ authors

Fig 18 / Lana river- source/ authors

Conclusions and recommendations

A combination of approaches is presented in this study to handle Tirana's increasing mobility issues and encourage balanced urban growth. We hope to decentralize city activity, reduce traffic, and build a more resilient and sustainable urban network by developing Shkoza as a thriving urban hub and proposing a new boulevard along the Tirana River.
The main focus of this project has been the morphological study of Tirana's main urban features, including the river, highways, plazas, and topographical contours. It provided guidance for the integration of sustainable design concepts, the strategic placement of infrastructure, and the activation of unused spaces. Redistributing traffic flows, lessening the strain on extremely crowded roads like Rruga e Elbasanit and Rruga Kavajës, and creating new hubs for social and commercial activity are the goals of the suggested measures.
Furthermore, specific schemes like improved secondary roads, new ring road exits, and thorough connection planning will guarantee Shkoza's smooth integration into the larger urban network. In places beyond the ring road with larger population densities, this strategy promotes accessibility and balanced expansion while utilizing underutilized transportation infrastructure.
This plan aims to create a cohesive urban fabric that promotes sustainable growth, increases mobility, and raises the standard of living for citizens of Tirana. Some recommandations that we want to take in consideration in further analysis are:
(1) Create Sustainable Infrastructure: To improve environmental sustainability and resilience, include eco-friendly features like green embankments, permeable surfaces, and public areas.
(2) Improve Public Transportation: To promote less reliance on cars, incorporate effective public transportation options, such as bus routes and bike facilities, along the new boulevard.
(3) Use Phased Development: To guarantee seamless integration and adaptation, construct the Shkoza Center and the boulevard in stages, giving priority to high-impact regions.
(4) Involve Stakeholders: To make sure the project reflects the interests and goals of all stakeholders, work together with local communities, legislators, and urban planners.
(5) Track and Assess Traffic Patterns: Keep a close eye on traffic patterns to gauge the success of interventions and make necessary adjustments to tactics.

References

Alexander, C. (1965) 'The City is Not a Tree,' Architectural Forum, 122(1), April.

Bagiouk, S.M. and Sofianou, E. (2020) Historic buildings and urban area revitalisation through placemaking: A case study. Available at: https://www.academia.edu/66964788/Historic_buildings_and_urban_area_revitalisation_through_placemaking_A_case_study (Accessed: [insert date]).

Cutieru, A. (2021) 'Adaptive reuse as a strategy for sustainable urban development and regeneration,' ArchDaily, 4 November. Available at: https://www.archdaily.com/970632/adaptive-reuse-as-a-strategy-for-sustainable-urban-development-and-regeneration (Accessed: [insert date]).

ECMT (2007) Managing Urban Traffic Congestion. Paris: OECD Publishing. Available at: https://doi.org/10.1787/9789282101506-en

Lynch, K. (1960) The Image of the City. Cambridge, MA: MIT Press.

Sitte, C. (2013) The Art of Building Cities: City Building According to Its Artistic Fundamentals. Translated by C.T. Stewart. Martino Fine Books. (Original work published 1889).