

5th Space Syntax Symposium

Fragments of a fading heritage

assessing effects of change in urban function over building conservation in the north-eastern hinterland of Brazil

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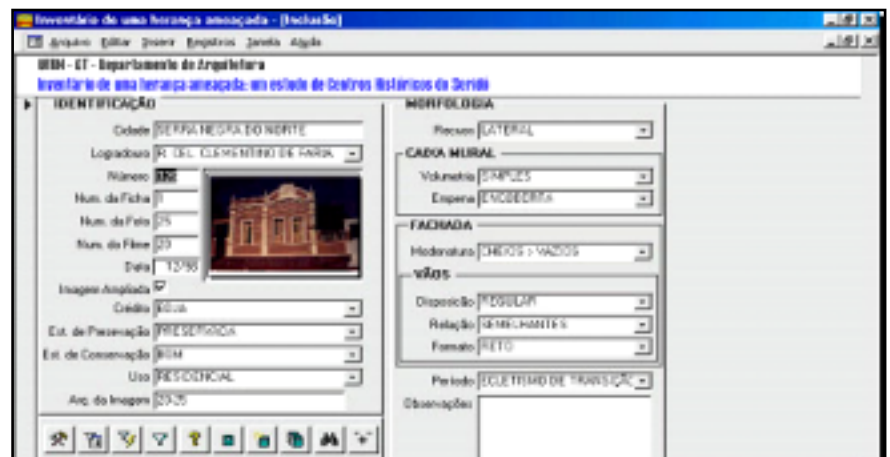
Abstract



This study assesses the effect that functional changes in hinterland towns have exerted over their built heritage. It focuses on Caicó and Acari - the oldest towns of Seridó, a sub-region of the sertão in north-eastern Brazil, which originated as riverside supporting posts to cattle raising in the 1700s, became commercial centres, mostly related to the cotton wool trade, especially during the last decade of the 1800s and the first half of the 1900s, and nuclei of tertiary activities since the 1960s, following the collapse of the local beef and cotton production, both unable to compete with that of other origins. The fierce urbanisation impetus that swept the country throughout the 1950s up to the 1970s also had a bearing on the development of the tertiary sector in both towns and on the slowing down and eventual suppression of the cotton industry.

A fading heritage

Empirical observations of Caicó, Acari and other towns in Seridó showed that living evidences of the trajectory described above, which had survived well into the 1970s, started to disappear from then on. This motivated an inventory developed along the 1990s, as well as a series of spatial modelling that aimed to shed light on the effects of the urban expansion over the architectural heritage. The results of the inventory are being gradually displayed in the web (<http://www.seol.com.br/bdc/>).



Space syntax analysis was applied to simulate successive stages of each town's urban growth and to ascertain whether positive correlations between spatial configuration properties and building conservation were to be found. To the central proposition that "(...) the fundamental correlate of the spatial configuration is movement" (Hillier, 1996), it may be added that different movement potentials resulting from the spatial configuration affects the way space is used differently and, therefore, the construction, transformation and destruction of buildings as they acquire (and lose) functions.

Movement potential – chromatically ranging from higher (red) to lower (blue) – and its effects on land use patterns were assessed by a comparative examination of integration values and building remains across the studied time span. Integration values were calculated through axial maps, processed by "Axman" and "Ovation" (UCL, 1997).

Figures 2 and 3 (a to c) display existing colonial, eclectic and modernist building remains and diachronic axial maps, juxtaposed over the present street grids of Caicó and Acari's town centres, reconstituted from historic written references (Teixeira, 2002). The axial maps represent the spatial configuration: (a) in the mid-19th century, with respective colonial buildings; (b) in the 1920s, with eclectic buildings; and (c) in the 1980s, with modern building remains.

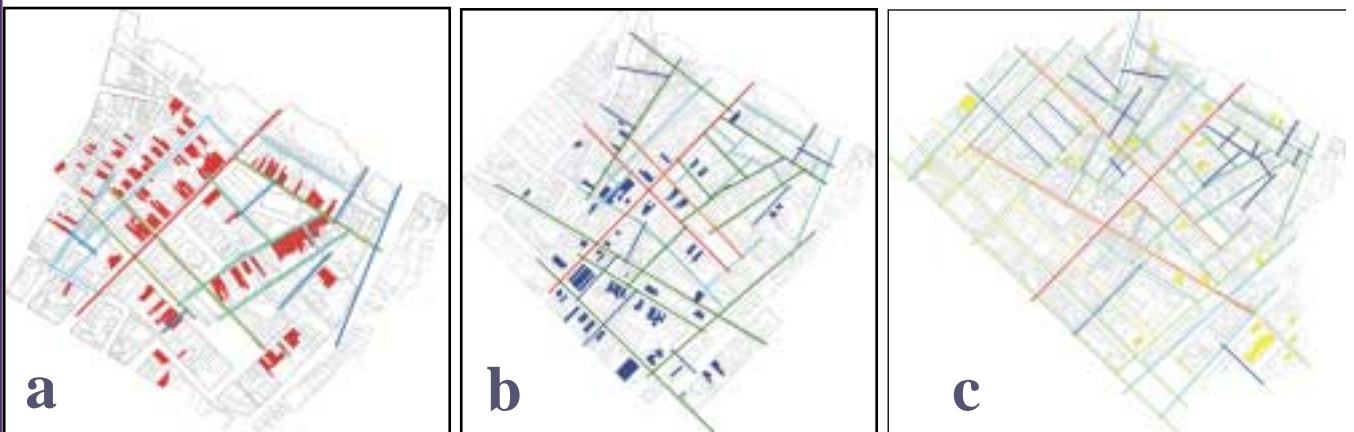


Fig. 2. Diachronic axial maps and existing building remains in Caicó

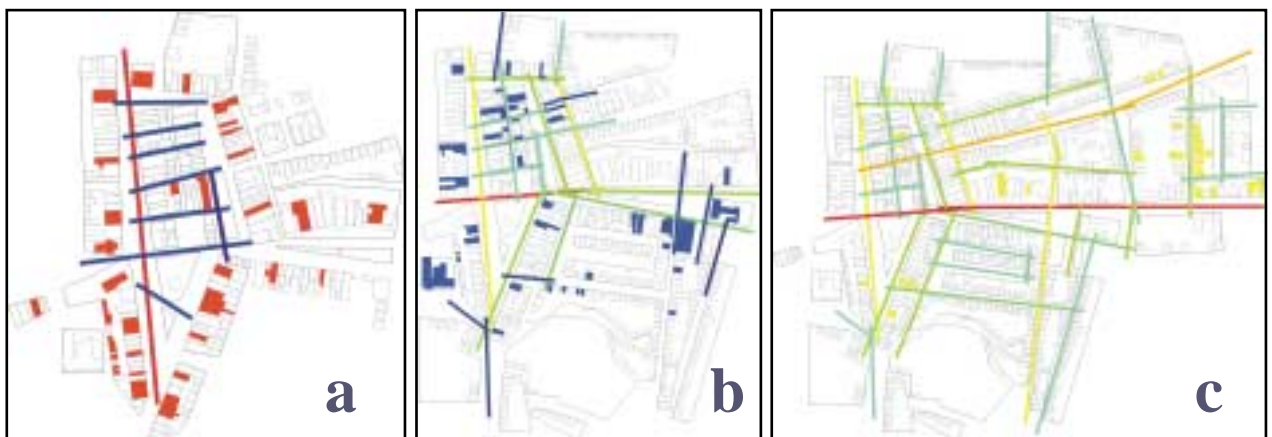


Fig. 3. Diachronic axial maps and existing building remains in Acari

The existing building remains match closely the network at each period thus confirming the reconstituted expansion. It also shows that buildings that appear at each successive stage tend to loosely follow the shifting of the integration core.

Figures 4 and 5 (a to c), show the axial maps together with recorded remains of buildings erected before the 1970s, and classified according to their stylistic affiliations - colonial, eclectic and modernist - that inform about time of construction: 19th to early 20th century, 1920s to 40s, 1950s to 70s, respectively.

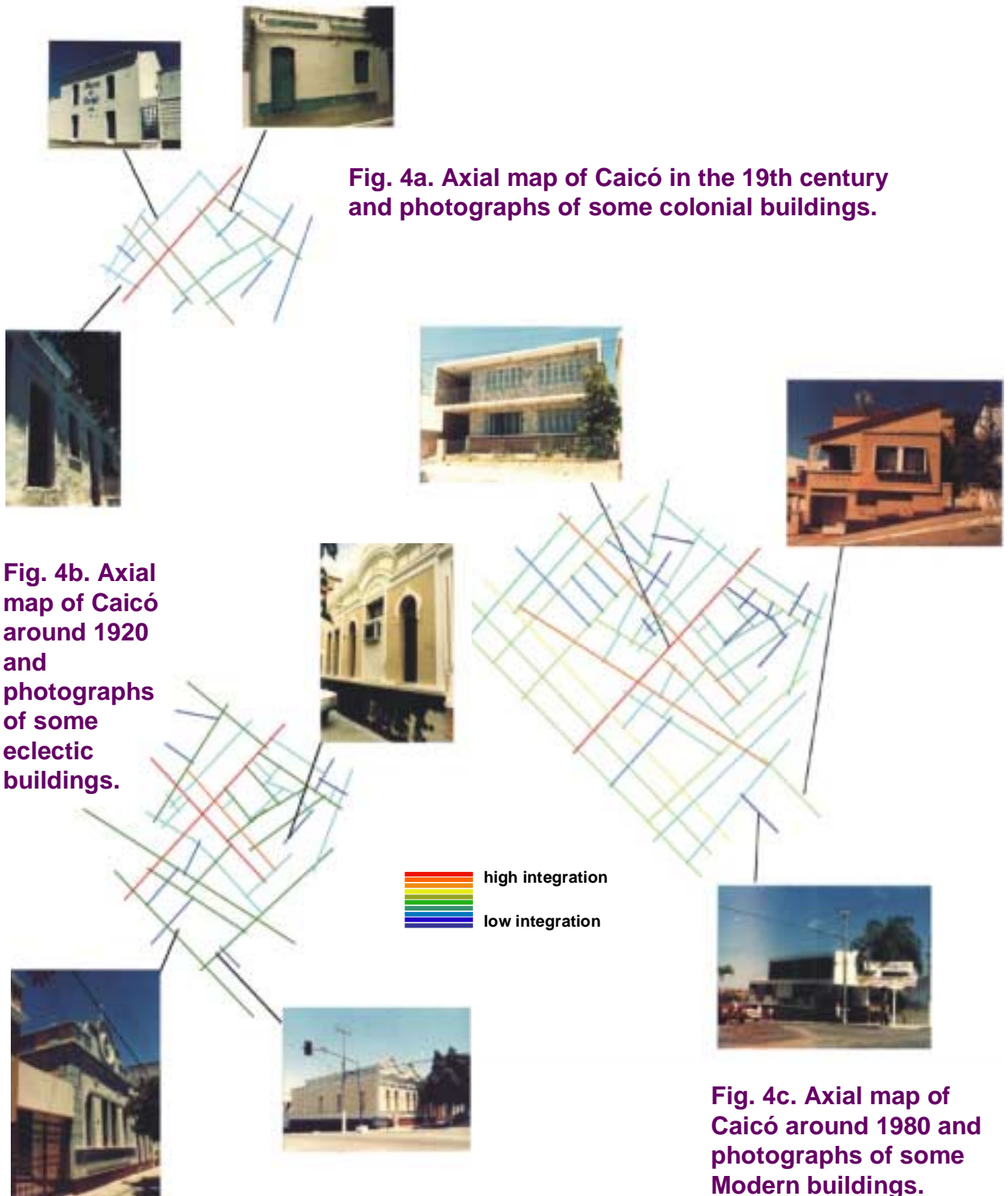





Fig. 5a. Axial map of Acari in the 19th century and photographs of some colonial buildings.



Fig. 5b. Axial map of Acari around 1920 and photographs of some eclectic buildings.


 high integration
 low integration



These results not only serve as living evidences of bibliographic records concerning the built ensemble, but also inform about its historically conditioned formation and transformation dynamics.

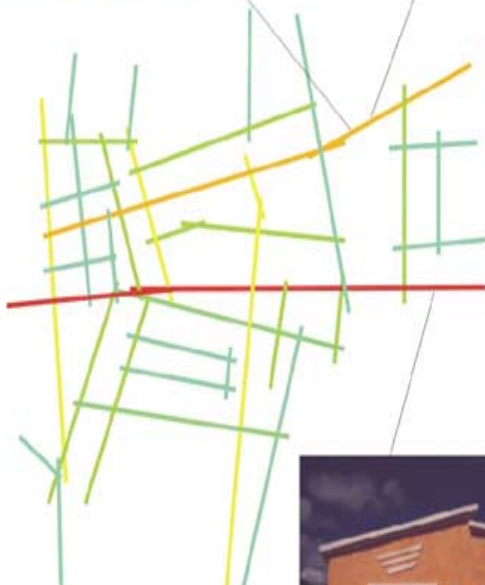


Fig. 5c. Axial map of Acari around 1980 and photographs of some Modern buildings.



Most integrated lines, at each period, coincides roughly with the presence of building remains of an equivalent epoch, as evidenced by their stylistic affiliation, thus suggesting that a wave of new constructions accompanied the establishment of highly integrated thoroughfares.

The impact of tertiary activities on the architectural heritage of Caicó is exposed in figure 6 (a and b). A gradual transference of commercial use from north-east to south-west accompanied the shift of the integration core over time, from the 19th Century, through the 1920s to the mid-20th Century.

Non-residential, strongly modified or disfigures cases tend to cluster in the south-western quarter of the map, along the most integrated lines, where commercial activities predominate, while buildings with fairly well preserved features concentrate in the north-east section, where residential uses are still found.

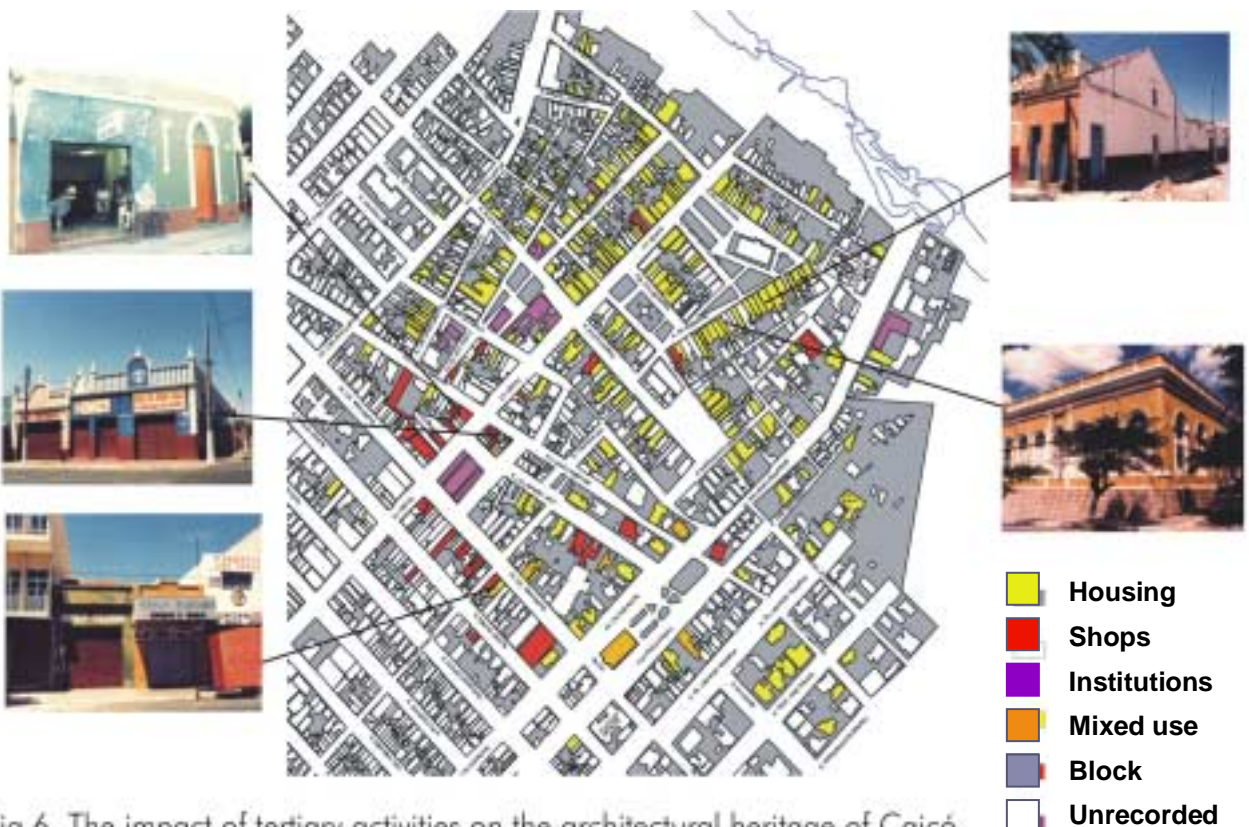
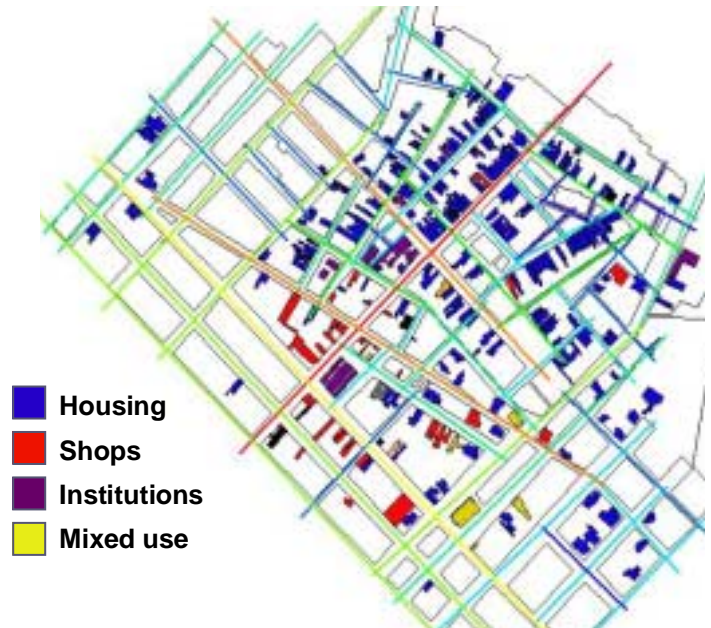
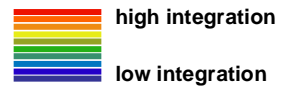


Fig.6. The impact of tertiary activities on the architectural heritage of Caicó.

Due to the changed economic role of these hinterland towns and to the urban expansion of the late 20th Century, the formation of new fringe neighbourhoods has caused the integration core to spread over virtually the entire urban fabric occupied before the 1970s. This process, (illustrated for Caicó, in figure 7a and 7b), which is unfolding not only in Caicó and Acari, but in several older towns of the Seridó region, has been followed by a continuous expansion of commercial uses towards the original town core.

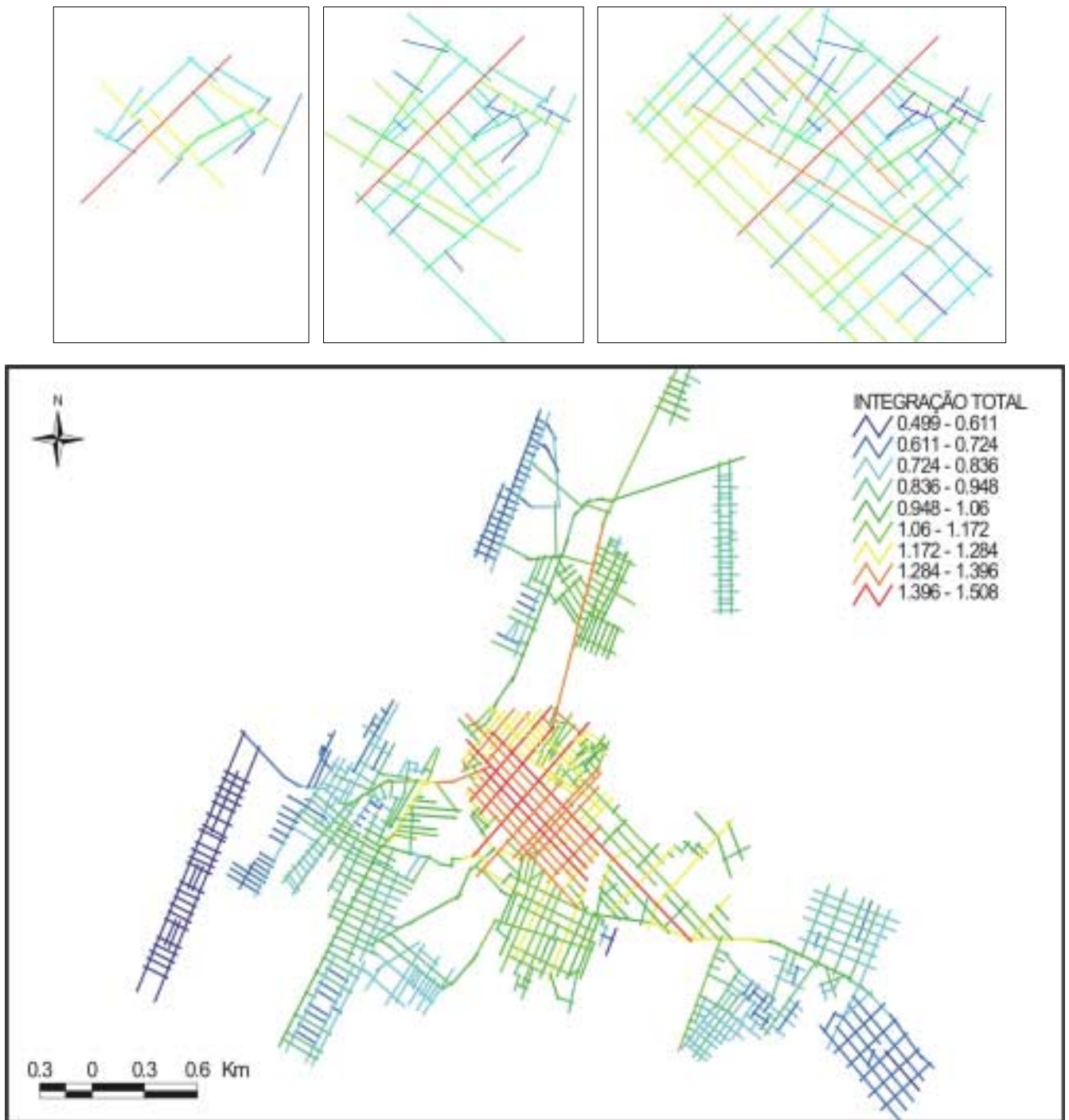


Fig. 7. Axial map of Caicó at the present time.

These morphologic findings are, therefore, an eloquent and somewhat alarming demonstration of a process in which urban settlements whose *raison d'être* was to give support to a rural-based society, lost its centuries-long character without acquiring urban rules capable of conciliating their new urban roles and the conservation of their built heritage.

Until well into the 20th century in the towns of Sertão, most dwellings were second residences of local farmers, being inhabited during certain social and religious festivities and remaining closed otherwise. Towns were then community loci in which the notion of intense co-presence, was a synonym of urbanity that counter-balanced, perhaps, the rusticity and isolation of the country life. Movement potential was thus an asset to be valued as civility and demanded architectural integrity as its natural complement. Once that polarity was lost the links between integration and architectural integrity were also lost, and movement potential become the sole correlate of commercial possibility.

References:

Hillier, B. (1996). *Space is the machine*. Cambridge University Press, pp: 35/152.

Teixeira, R. (2002) “De la ville de Dieu à la ville des Hommes. La sécularisation de l'espace urbain dans le Rio Grande do Norte, Brésil”. Thèse de doctorat: Paris:EHESS.

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* The inventory of pre-modernist and modernist architectural remains covers 22 old town centres in the Seridó region (sertão of Rio Grande do Norte)