

# Accessibility and security: Syntactic and perceptual analysis in two low-income housing estates

# 44

Antonio Reis<sup>1</sup>, Adriana Portella<sup>2</sup>, Janice Bennett<sup>3</sup>, Maria Lay<sup>4</sup>

<sup>1,4</sup>Federal University of Rio Grande do Sul, Brazil; University of Sydney, Australia

<sup>2,3</sup>Federal University of Rio Grande do Sul, Brazil

## Abstract

This article has as its objective the investigation of how the urban spatial characteristics concerning estate accessibility, specifically influence low-income residents' perception of security of their dwellings and open spaces in a comparative study of two housing estates, located in the metropolitan region of Porto Alegre, strongly affected by security problems. It is verified in these specific urban contexts how far greater segregation and depth, and less control determine open spaces perceived by residents as more vulnerable to crime. Also examined is the occurrence of different types of crimes and in which period of the day they tend to occur. The morphology of these estates is characterised by the modernist approach of placing buildings in an open field, without a direct connection with the streets and with no clear definition of open spaces. The housing is arranged in four storey blocks of flats, sold to residents by the public sector, during the 1980s. Residents revealed their perceptions concerning the security of open spaces through 30 questionnaires applied in each estate. In a map showing the housing estate layout, included in the questionnaire, respondents indicated which areas were perceived as more insecure and where different type of crimes had already occurred. Apart from the non-parametric statistical tests performed to reveal residents' perception of crime, data is analysed by reference to global integration, local integration and control. The main results found for accessibility do not allow for a relationship to be established between the syntactic properties examined and the occurrence of crimes and perception of security by low-income residents of the housing estates investigated.

## Keywords

accessibility,  
syntactic analysis,  
perceptual analysis,  
low-income,  
housing estates,  
security

# 44.1

tarcisio@orion.ufrgs.br

## Acknowledgements

This investigation was carried out with the participation of master student Patricia Vieira da Cunha, from PROPUR/Federal University of Rio Grande do Sul, Porto Alegre, Brazil

## Notes

<sup>1</sup> Research Project financed by the Caixa Econômica Federal (a national government bank) and co-ordinated by Dr. Maria Cristina Lay, School of Architecture/ PROPUR, Federal University of Rio Grande do Sul (UFRGS).