

Research on the Identification Degree of Urban Form in China from the Perspective of Public Cognition

Introduction

Since the reform and opening up, China has experienced a period of rapid urbanization. Many cities lost their traditional urban form characters. This paper aims to find and study the various elements of urban form, which affect the identification degree of urban form in public cognition, so as to provide ideas for city decision-makers and designers to create distinctive urban form.

Materials and Methods

This paper investigates the public identification degree of various urban form elements of Xi'an, Beijing, Shanghai, Chongqing, Shenzhen, and Hong Kong in small, medium, large scales.

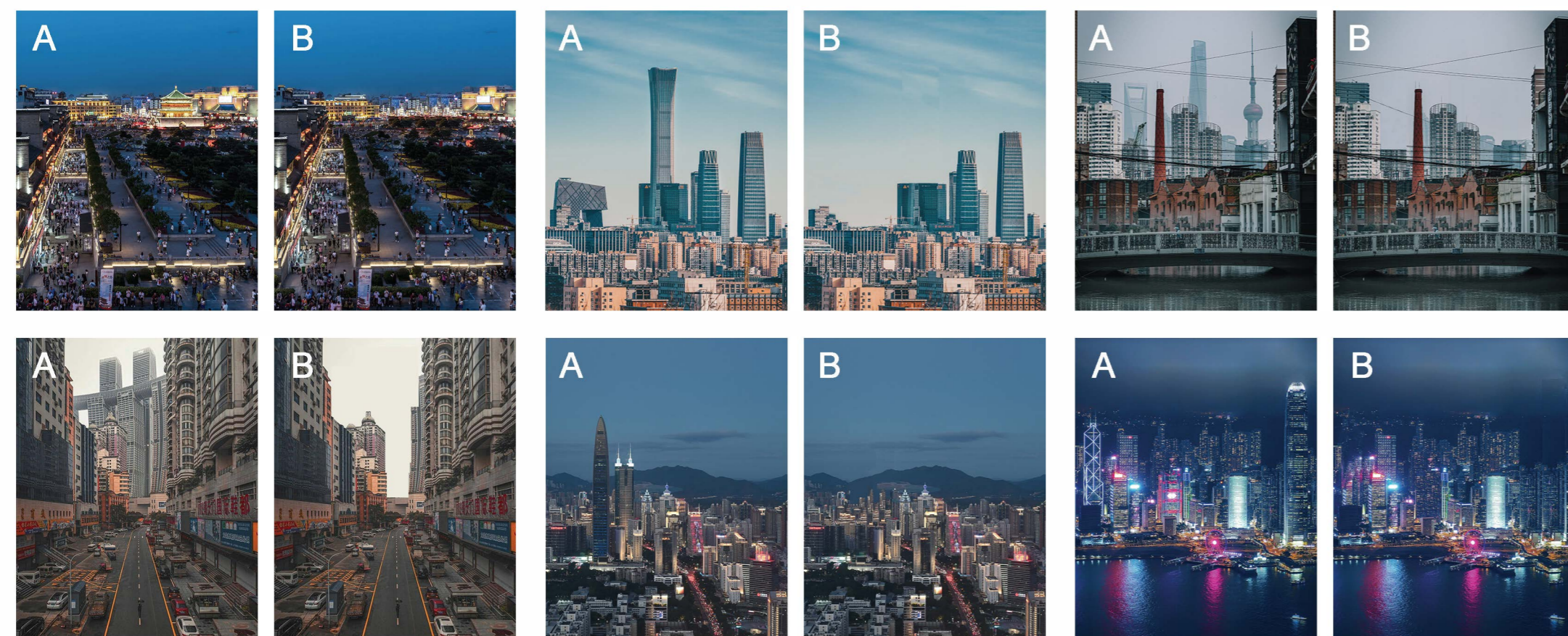
Small Scales

Based on the theories and methods of Lynch and Moudon, this paper regards building/lot as the small-scale urban form element, and finds the 20 most searched buildings/lots in each city from Google and Baidu. Then 5 of them are selected as materials, and classified as different types.

Xi'an	Type	Beijing	Type	Shanghai	Type
Xi'an Museum	▲	CITIC Tower	▲	China Arts Museum	▲
Dayan Pagoda	■	CCTV Headquarters	▲	Oriental Pearl Tower	▲
Jianfu Temple	■	Tian'anmen	■	World Financial Center	▲
Daming Palace	■	Miaoying Temple	■	Broadway Mansions	●
Bell and Drum Tower	■	Bell and Drum Tower	■	Jingan Temple	■
Chongqing	Type	Shenzhen	Type	Hong Kong	Type
Raffles City	▲	KingKey 100 Tower	▲	Bank of China Tower	▲
Chongqing Art Museum	▲	Ping An Finance Centre	▲	Tsing Ma Bridge	▲
Yangtze River Bridge	▲	Shenzhen Odeum	▲	HSBC Main Building	▲
Monument of Liberation	●	Universiade Center	▲	Legislative Building	●
Huguang Guild Hall	■	Roc City Museum	■	Wong Tai Sin Temple	■

▲ Modern building ● Modern building before 1949 ■ Historical building

The pictures of the above landmark buildings with urban environment are taken as group A. The pictures, processed on group A and removed the landmark buildings, are taken as group B. They are put into the questionnaire to investigate whether citizens can identify the correct city. A total of 297 valid questionnaires were obtained. Here are part of the above images:



Medium Scales

This paper regards street-block, neighborhood/district as the medium-scale urban form element, and finds the 10 most searched elements in each city from Google and Baidu search engines. 3 of them are selected as investigation materials, and classified as different types.

Since the medium-scale element contains complex smaller scale elements, and all the elements have evolution cycle, the variable of time is added in this stage to study the public identification.

Xi'an	Type	Beijing	Type	Shanghai	Type
Tang Paradise	●	Beihai Park	▲	The Bund	▲
South Street	■	Yandaixie Street	●	Shikumen Scenic Spot	●
Great Tang All Day Mall	■	Beijing CBD	■	Nanjing Road	■
Chongqing	Type	Shenzhen	Type	Hong Kong	Type
Chaotianmen Wharf	▲	Roc City	●	Victoria Harbour	▲
Ciqikou ancient town	●	Shekou Industrial Zone	■	Typhoon Shelter	■
Hong Ya Dong	■	Huaqiang North Area	■	Jordan Road	■

▲ Natural Humanistic Element ● Historical Humanistic Element ■ Modern Humanistic Element

The pictures of the above street-block, neighborhood/district at present are taken as group A. The pictures of the above areas in 1970s or 1980s are taken as group B. They are put into the questionnaire to investigate whether citizens can identify the correct city.

Conclusion

In small scale, landmark building/ lot can increase the public identification degree of urban form. The higher its popularity and its importance in urban planning, the lower the obvious degree of its surrounding urban environmental characteristics, the higher the degree of increase. In medium scale, unique natural feature, unique artificial landscape, famous landmark building,

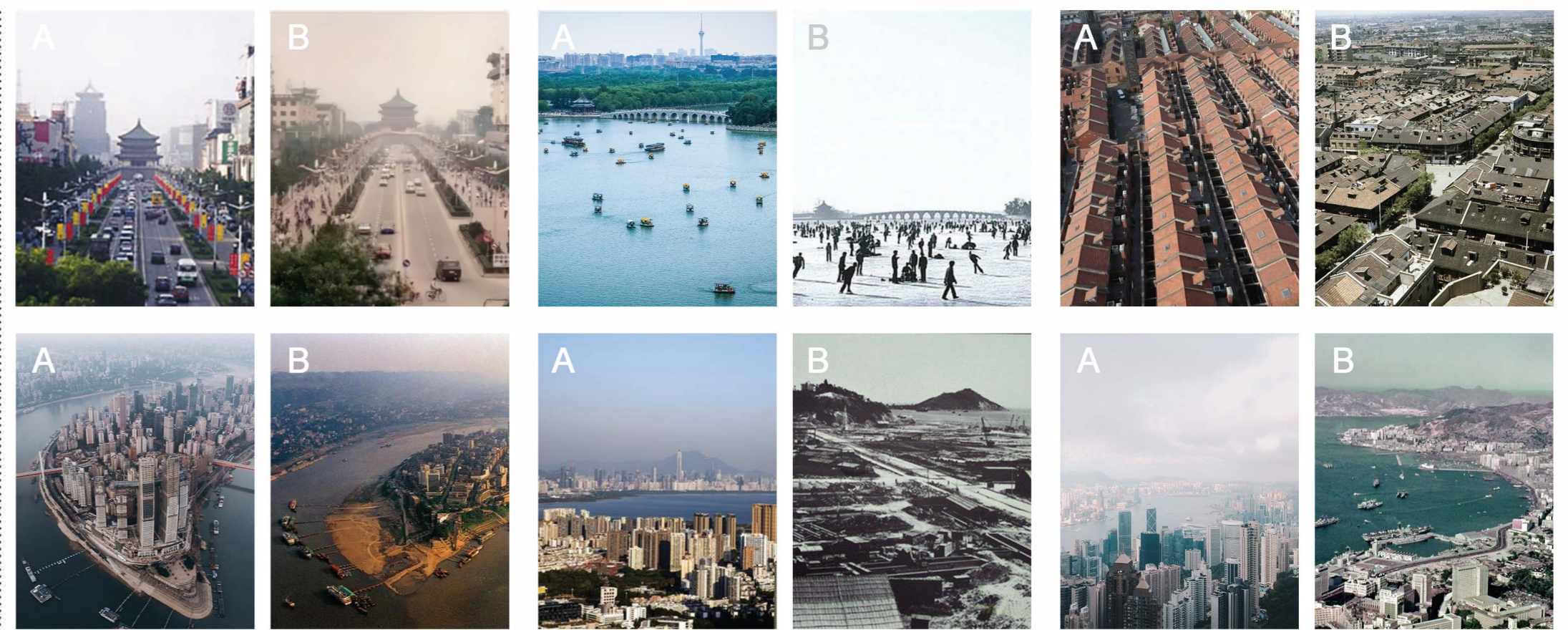
Literature Review



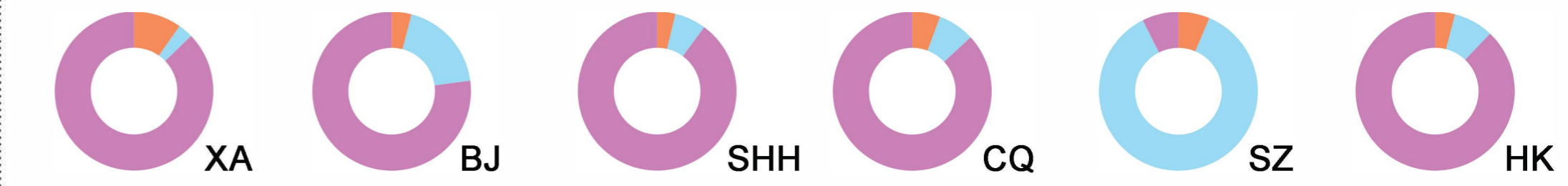
Kevin Lynch, in *The Image of the City*, thought that a city with high quality urban form has Imageability and legibility in public cognition. He used the method of mental map to summarize the elements of the image of city to path, edge, district, node and landmark, and showed the relationship between their identity, structure, meaning and the public.



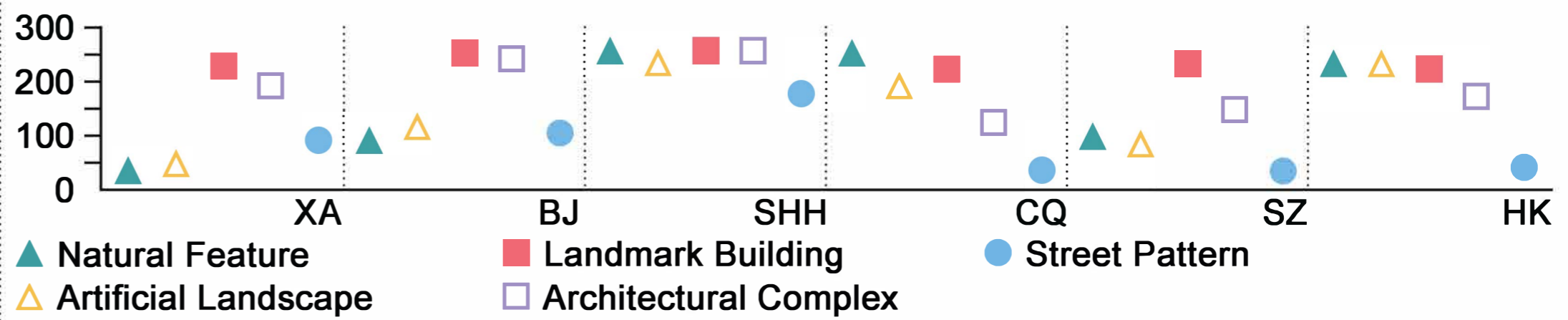
Anne Vennez-Moudon, thought that people behavior, influenced by cultural systems and socio-economic, plays a decisive role in the formation of urban form, and is limited by the environment. She divided the urban form levels into several scales: building/ lot, street-block, neighborhood/ district, small city, large city and region/ metro.



■ Identify from A but not B ■ Identify from both A and B ■ can't identify from either A nor B



Based on the identified pictures, the paper continues to investigate that which internal elements have the high public identification degree.



Large Scales

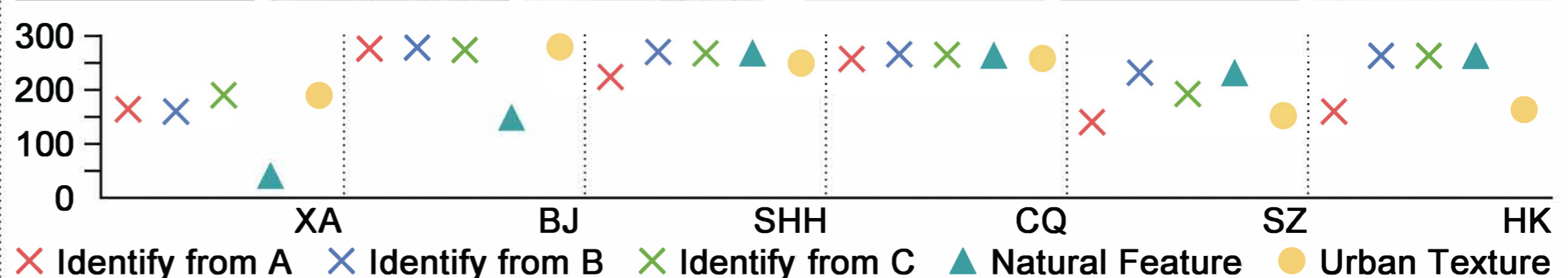
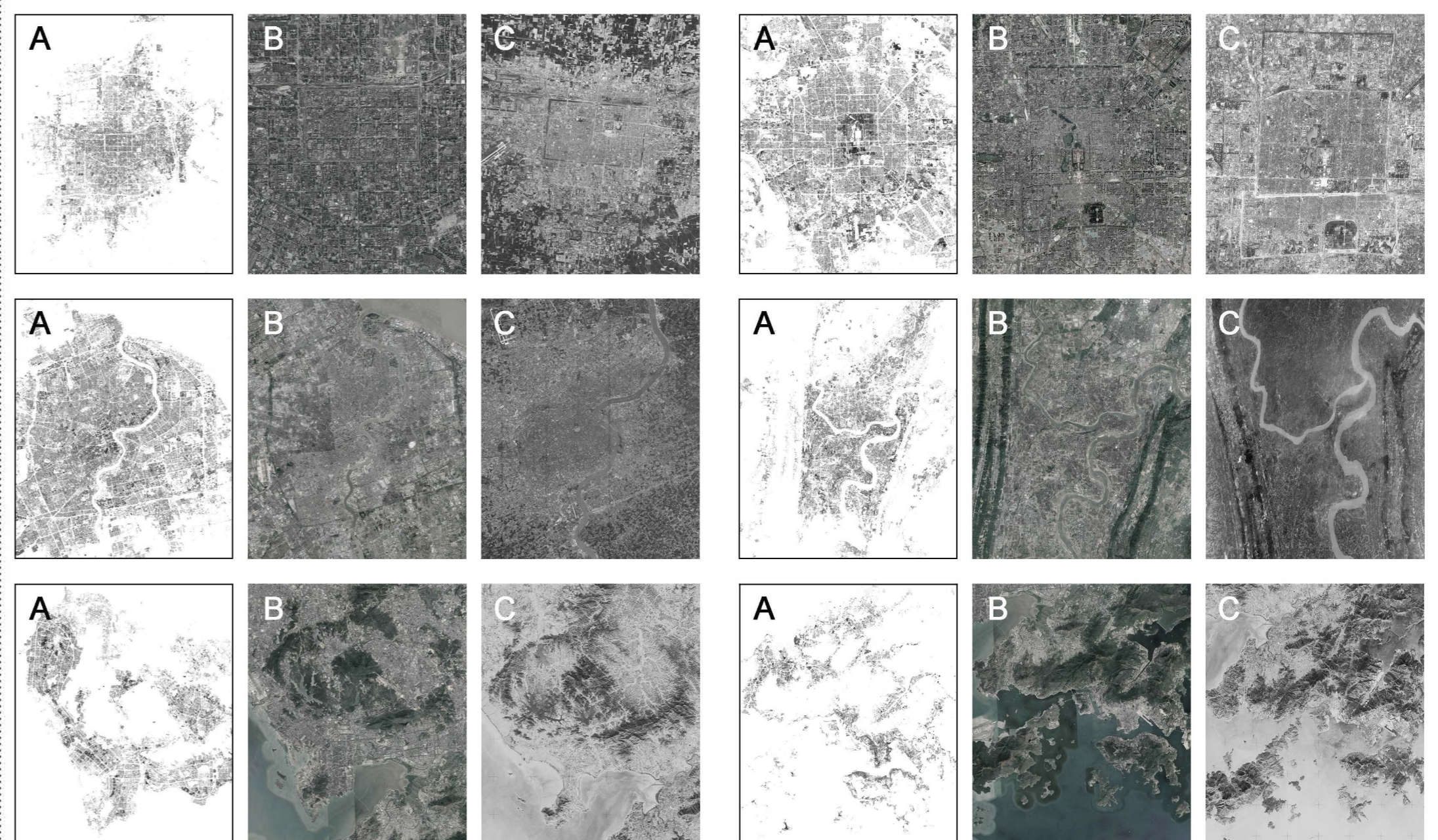
This paper continues the above ideas and regards whole city as the large-scale form element. The pictures with figure-ground relation of the city at present are taken as group A.

The satellite Images of the city at present are taken as group B.

The satellite Images of the city in 1970s or 1980s are taken as group C.

They are put into the questionnaire to investigate whether citizens can identify the correct city and further investigate which internal elements have the high public identification degree.

A total of 297 valid questionnaires were obtained. Here are the above images:



characteristic architectural complex and characteristic street pattern can increase the degree of urban form identification in public cognition. The more types of above elements a city contains, the higher identification degree of its urban form. In large scale, a city with special urban texture, affected by distinctive planning methods or historical remains, or unique natural feature has high identification degree in public cognition.