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摘要

在过去的 20 年里,城市化进程的加快和城市地区的非工业化引起了中国的兴趣, "工业遗产 "引起了政府、学者和机构的更多关注。工业遗产不再被视为衰退的标志, 而是被视为可再利用的资源,并被转化为具有加强创意产业和新经济潜力的灵活空 间。因此,中国工业遗产的保护是正在孕育的当代国际议论中的一个重要议题,更 重要的是,它代表了中国政府的一个新目标,是近期重要法规的制定对象。本研究 旨在根据中国在国家层面采用的新法律工具,重现关于中国工业遗产的论述,以确 定、保护和管理其工业遗产的范围。从 2016 年开始,中国开始推动具体的法规,以 建立一个标准化的识别系统来选择、保护和管理国家的工业遗产。最近,中央的努 力成为一个显而易见的议题,因为在 2016 年之前,国家对工业遗产的实践只是由地 方政府来监管。从 2000 年初开始,中国的地方政府开始颁布自己的政策来保护和再 利用废弃的工业区;这些经验与国际惯例交织在一起,为 2018 年建成一个识别、保 护和再利用国家工业遗产的标准化规范系统做好了基础。该研究表明,中国在寻找 界定工业遗产的共同点方面经历了漫长的过程,这也是问题的开始。历史路径的再 现和文化遗产的法律和行政制度的发展是一个重要的前提,它使研究首先能够将工 业遗产的讨论植根于更广泛的法律、意识形态和历史框架中,其次它提供了在遗产 价值的演变中展示的可能性,通过这一视角观察和解释工业遗产保护领域的形成。 这项研究提供了一种创新的研究方法,描述了中国工业遗产当代现象的复杂性,在 一个强大的多学科框架内结合了定性和定量的方法,填补了国际工业遗产文献中关 于中国实践的科学空白,在此通过不同的尺度进行分析。事实上,这项研究不仅通 过对所有 164 处国家级工业遗产的更新普查,展示了中国工业遗产实践的当代现状, 而且它还提供了对工业遗产化经验的解读,采用了不同的视角,将国际和跨国视角 切换到地方和国家视角,以及国家层面的视角。通过这项研究,中国工业遗产化的 经验被认为是一种特殊的实践,它源于地方政府的经验,通常采用国际惯例作为模 式,并演变为国家的标准化程序,以响应中国遗产和城市环境的特点和需求。考虑 到中国实践的演变及其通过跨国接触和地方经验的交织发展,本研究采用的方法论 方法是利用不同的尺度来解读中国工业遗产现象的演变,但是,最终通过国家的视 角来描绘这一过程。事实上,定量分析描绘了中国工业遗产的数量、类型、年代和 地域,作为衡量遗产现象的参数,试图为解读这一过程提供一些方向。

关键字:工业遗产;遗产化进程;文化遗产价值;中国文化遗产;中国工业文化。

ABSTRACT

During the past two decades a process of speedy urbanization and deindustrialization of urban areas has interested China and "industrial heritage" has attracted much more attention by government, scholars and institutions. The industrial legacy is not regarded any more as a sign of recession, but it is now seen as resources to be reused and transformed into flexible spaces with the potential to enhance creative industry and new economies. As a consequence, the protection of industrial heritage in China is an important issue that is nurturing the contemporary international debate and, even more important, it represents a new goal for Chinese Government, being object of recent important regulations.

The research aims to reproduce the discourse on Industrial heritage in China in light of the new legal tools adopted by the country at the national level to the scope to identify, protect and manage its industrial legacy. Starting from 2016 China begun to promote specific regulations to set a standardized identification system to select, protect and manage the national industrial legacy. Recently, the efforts of the central state became an evident issue, since- before 2016- the national practice on industrial heritage were merely regulated by local states. Starting from the early 2000's the Chinese local states begun to promulgate their own policies to protect and reuse discarded industrial areas; these experiences, intertwined with international practices, prepared the ground for what in 2018 became a standardized regulated system to identify, protect and reuse the national industrial heritage.

The study demonstrates the long process made by China in finding a common ground in defining its industrial heritage, form the very beginning of the issue. The reproduction of the historical path and the development of the legal and administrative regimes for cultural heritage represented an essential premise which allowed the research first to root the industrial heritage discourse within a wider legal, ideological and historical framework and secondly it gave the possibility to demonstrate in the evolution of the heritage' values the lens through which to watch and explain the formation of the field of industrial heritage protection.

This research offers an innovative research methodology which portrays the complexity of the Chinese industrial heritage contemporary phenomenon combining

ABSTRACT

qualitative and quantitative approaches within a strong multidisciplinary framework, filling a scientific gap- within the international industrial heritage literature- on the Chinese practice which is here indagated through different scales. The study, in fact, not only shows the contemporary status quo of the Chinese industrial heritage practice thanks to an update census of all the 164 industrial heritage sites listed at national level, but it also offers a reading of the industrial heritagisation experience adopting different perspectives which alternate the international and transnational lens to the local-state one, to the national level perspective. The Chinese industrial heritagisation experience is indagated through this study as a peculiar practice which originated from localgovernments experiences, often adopting international practices as models, and evolved into a national standardized procedure, responding to the specificities and needs of the Chinese heritage and urban context. Considering the evolution of the Chinese practice and its intertwining development through transnational contacts and local experiences, the methodological approach adopted by this research makes use of different scales to read the evolution of the Chinese industrial heritage phenomenon, but, in the end the process is pictured through a national perspective. In fact, the quantitative analysis portrays the Chinese industrial heritage in numbers, typologies, ages and geographies which act as parameters to measure the heritage phenomenon in the attempt to suggest some directions to read the process. The thesis, in its complex, describes and documents an heritagization process which is happening now in China, it records a new phase of the heritage in China and fills a gap in the international industrial heritage literature with a case, the Chinese one, which- seen in a transnational perspective- could be used as new reference of industrial heritage practices.

Key words: industrial heritage; heritagization process; cultural heritage values; Chinese cultural heritage; Chinese industrial culture.

TABLE OF CONTENTS

摘要	I
ABSTRACT	II
TABLE OF CONTENTS	IV
LIST OF FIGURES AND TABLES	VII
INTRODUCTION	1
Premises of the study and research questions	1
Structure of the study and methodological approach	6
CHAPTER 1 REPRODUCING THE DISCOURSE ON CULTURAL HERITAGE CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATIONS MODERN VALUES	AND
1.1 The seminal influence of Liang Sicheng on heritage conservation practice in	
1.1.1 Chinese Architecture and Architectural History in the early Twenty Cent 1.1.2 The Society for Research in Chinese Architecture	19
1.2 1930-1982. Domestic legal regime and management of Cultural Relics in Ch 1.2.1 1930-1961: a focus on Provisional Regulations on Protection Administration of Cultural Relics	n and 33 in the
1.3 UNESCO, Chinese heritage and international debate	43
1.4 China Principles Project. Actors and Institutions 1.4.1 China Principles Project, an overview 1.4.2 GCI. Interview to Neville Agnew and Martha Demas 1.4.3 Australian Heritage Commission. Interview to Sharon Sullivan	50 53
1.5 China Principles. Drafting process, debate and values	63
1.6 Current status of cultural heritage legal and administrative system in China 1.6.1 Current legal regime	79

TABLE OF CONTENTS

CHAPTER 2 REPRODUCING THE DISCOURSE ON INDUSTRIAL HERITAGE IN CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTEMPORARY PRATICE
2.1 Industrialization and Reform Era. Some premises to understand Chinese industrial remains
2.1.2 Land politics in urban China
2.2 Industrial remains and creative economies: the pioneering roles of Shanghai Beijing and Guangzhou in defining new urban strategies
2.2.3 An early bottom-up practice in Beijing: the 798 Art District case
2.2.5 Early samples of creative spaces in Guangzhou
2.3 Industrial Heritage in China: defining a new category of the heritage131
2.4 Legal regime on protection and management of industrial heritage in China. Premises and practice
2.4.2 The guiding opinions on promoting the relocation and transformation of old industrial zones in urban area
Chinese Excellent Traditional Culture
2.5 A national policy: Interim Measures for the Administration of National Industrial Heritage
2.6 An insight on Chinese industrial heritage. Interview to Professor Liu Boying 157
CHAPTER 3 MAPPING THE CHINESE INDUSTRIAL HERITAGE162
3.1 Becoming an industrial heritage site
3.2 Census of the Chinese national industrial heritage (2017-2020)

TABLE OF CONTENTS

3.2.4 Third Batch of National Industrial Heritage List. December 2019	
CHAPTER 4 INDUSTRIAL HERITAGE IN CHINA	.226
4.1 Mapping China's national industrial heritage (2017-2020)	.227
4.2 Industrial heritage in China, to what extent?	lture
4.3 Adaptive reuse: Showcasing industrial heritage at the Beijing Olympic Games 2 The case of Shougang	.255
CONCLUSION	.271
Heritage Values, China's development path.	.271
Lacks and weakness of the industrial heritage system in China	.274
Status quo of industrial heritage in China	.276
Broader significance of Industrial heritage in China	.280
Innovation of the research and future perspectives	.281
REFERENCES	.284
APPENDIX	.304
ACKNOWLEDGEMENTS	.343
声明	.344
RESUME	.345
COMMENTS FROM THESIS SUPERVISOR	.351
RESOLUTION OF THESIS DEFENSE COMMITTEE	352

LIST OF FIGURES AND TABLES

Figure 1.1 Liang Sicheng. Annotation on Yingzhao Fashi (Vol. I), Rules for structural carpentry, fig.
14 (Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary,
Exbition, Tsinghua University Art Museum, Beijing, 2021/08/10-20
Figure 1.2 Portrait of Liang Qichao at 56 years old. (Source: Liang: the Overarching — A Documenta
Celebrating Liang Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museum, Beijing
2021/08/10-2022/05/05)
Figure 1.3 A draft page of Liang Sicheng assignment at the University of Pennsylvania, 1925 which
show its exposure to the Beaux-Arts educational approach in studying arts and architecture. (Source:
Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition,
Tsinghua University Art Museum, Beijing, 2021/08/10-2022/05/05)
Figure 1.4 Members of the Society for the Research in Chinese Architecture on their field trip to
Datong, Shanxi Province. 1933. First from left Mo Zongjiang; second from left: Liu Huiyin: third
from left: Liu Duzhen; Photographed by Society for Research in Chinese Architecture. (Source: Liang:
the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition,
Tsinghua University Art Museum, Beijing, 2021/08/10-2022/05/05)
Figure 1.5 Liang Sicheng, A pictorial History of Chinese Architecture, typewritten English-language
manuscript. Completed in 1946. Source: Liang: the Overarching — A Documenta Celebrating Liang
Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museu Museum, Beijing,
2021/08/10-2022/05/05)
Figure 1.6 Liang Sicheng discussion the design for the United Nations Headquarter with famous
architects in New York. 1947. (Source: Liang: the Overarching — A Documenta Celebrating Liang
Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museum, Beijing, 2021/08/10-
2022/05/05)
Figure 1.7 Liang Sicheng, Yingxian Pagoda, Fogong Monastery, Shanxi, China (dating to 1056).
(Source: Liang Ssu-ch'eng, A Pictorial History of Chinese Architecture (Cambridge, MA: MIT Press,
1984): a) frontal section, 1934, p. 71; b) photograph, 1934, p. 69; c) watercolor rendering, 1935, p.
70)
Figure 1.8 Flow Chart of the Conservation process proposed by China Principles (ICOMOS China
2004, p. 77)
Figure 2.1 Numbers of Creative Industry Parks by district distribution. (Source: UNESCO 2017,
appendix 2)
Figure 2.2 Shanghai, 1933-Old-Millfun. (Source:
https://www.timeoutshanghai.com/venue/Around Town-Historical Buildings/22803/1933-Old-

LIST OF FIGURES AND TABLES

Millfun.html)
Figure 2.3 M50 industrial spaces converted in art spaces and galleries. (Source:
http://www.digitalkaleidoscope.in/2017/06/explore-shanghai-m50-moganshan-lu-art.html)
Figure 2.4 Location of 798 Art District within Beijing map. (Source: Dai et al. 2015, p. 5289) 109
Figure 2.5 Poster of "Rebuilding 798" on April 13 2003 (Source: Dai et al. 2015, p. 5293)115
Figure 2.6 The flyer of the first Dashanzi Art Festival in 2004. (Source: Dai et al. 2015, p. 5295) 117
Figure 2.7 Some of Thinking Hands group members, key role players of the 798's bottom-up
conversion process: Huang Rui (center), Berenice Angremy (front row, third from left), Robert Bernell
(second row, center), Karon Morono Kiang (front row third from left). Picture by Liu Yiwei (Source:
Beijing 798, 2004, p. 207)
Figure 4.1 The map shows the geographical distribution of the industrial national heritage sites as
listed by the four batches of national lists (2017-2020) issued by the Ministry of Industry and
Information Technology. (Source by the author)
Figure 4.2 Historical classification of China's Industrial heritage site. The graphic show the
percentages of the national heritage lists representing the four historical periods of the industrial
development of the country according to the periodization discussed in chapter 3m paragraph 3.1.1
"Industrial Heritage: values and historical categories". (Source by the author)
Figure 4.3 The graphic shows the industrial typologies represented by the listed enterprises belongings
to the Fourth industrial period (1949-1982) and their percentages according to the database (Appendix
I). (Source by author)
Figure 4.4 The map shows the geographical distribution of the 74 industrial heritage sites belonging
to the Fourth Industrial period (1949-1982). (Source by the author)
Figure 4.5 The map shows the geographical distribution of the 32 industrial heritage sites belonging
to the Second Industrial period (1840-1910). (Source by the author)
Figure 4.6 The map shows the geographical distribution of the 43 industrial heritage sites belonging
to the Third Industrial period (1911-1948). (Source by the author)
Figure 4.7 The graphic shows the categories of the industrial heritage sites selected by the four lists
issues by the Ministry of Industry and Information Technology from 2017 to 2020 and their
percentages according to the database (Appendix I). (Source by the author)
Figure 4.8 The graphic shows the typologies of all the industrial heritage sites selected by the four lists
issues by the Ministry of Industry and Information Technology from 2017 to 2020 and their number
according to the database (Appendix I). (Source by author)
Figure 4.9 The map shows the most important documents issued from 2014 to 2021 by different central
government agencies related to the development of the national Industrial Culture and to the protection
and management of Industrial Heritage, mapping their relations within the big ideological, political
and economic framework of Made in China 2025 program. (Source by the author)
Figure 4.10 Position of Shougang Industrial Park within Beijing Municipality area. (Source: pag. 4 of

LIST OF FIGURES AND TABLES

the brochures "New Capital City Renaissance landmark in the new age" printed in 2019 and collected
by the author during the event hold in the park in May 2019.)257
Figure 4.11 No. 3 Blast Furnace transformed into an enterprise historical museum. (Source by the
author)
Figure 4.12 BOCOG headquarter in Shougang Industrial Park in ex silos. (Source by the author)262
Figure 4.13 and Figure 4.14 Big Air platform in Shougang Industrial Park. (Source by the author).263
Figure 4.15 The Visitor Center within the former Oxygen Factory designed by Politecnico di Torino
with the Big Air venue in Shougang Industrial Park. (Source by the author)264
Figure 4.16 Qunming Lake (cooling pool) of Shougnag Industrial Park (Source by the author)266
Table 2.1 Table which summarizes the institutional steps made by China to define industrial heritage
as a new label of the national heritage to be protected. (Source by the author)
Table 2.2 This table resumes the institutional path made by different governmental departments in
issuing documents to establish a new industrial heritage legal conservation system. (Source by the
author)
Table 2.3 Annex table to the "The guiding opinions on promoting the relocation and transformation of
old industrial zones in urban area" document containing the key tasks department division.
(Translation by the author).
Table 3.1 First Batch of industrial heritage national lists
Table 3.2 Second Batch of National Industrial Heritage List
Table 3.3 Third Batch of National Industrial Heritage List
Table 3.4 Fourth Batch of National Industrial Heritage List

Premises of the study and research questions

The research aims to reproduce the discourse on industrial heritage in China in light of the new legal tools adopted by the country at the national level to the scope to identify, protect and manage its industrial legacy. Starting from 2016¹ China begun to promote specific regulations to set a standardized identification system to select, protect and manage the national industrial legacy. Recently, the efforts of the central state became an evident issue, since before 2016, the national practice on industrial heritage were merely regulated by local states. Starting from the early 2000's the Chinese local states begun to promulgate their own policies to protect and reuse discarded industrial areas; these experiences, intertwined with international practices, prepared the ground for what in 2018² became a standardized regulated system to identify, protect and reuse the national industrial heritage.

Within the field of studies of industrial heritage, this research would aim to fill a gap of the international literature regarding the specific experience of industrial heritage processes in China which, from an English language literature perspective, it is almost³ completely missing of updated studies. In fact, both the Chinese and the international literature are lacking of a comprehensive study on the development of the latest Chinese

¹ In 2016 the Ministry of Industry and Information Technology issued the *Guiding Opinions on strengthening the development of Industrial heritage*; In 2017 the Ministry of Industry and Information Technology launched the first pilot project to identify the first batch of the national industrial heritage sites. In 2018 the same Ministry of Industry and Information Technology promulgated the *Interim Measures for the Administration of National Industrial Heritage*, the very first set of regulations to give an order to the identification, to the protection and to the reuse of the national industrial legacy. In the same year the second batch of national industrial heritage lists had been published, followed by an annual list published in December of every year starting from 2018, which is still on going.

² In 2018 the Ministry of Industry and Information Technology issued the *Interim Measures for the Administration of National Industrial*, the first legal tool to regulate the national practice on protection and management of industrial heritage in China.

³ The most updated and complete international study which adopt a national perspective to indagate the industrial heritagization phenomenon in China is the one by Lu, Liu and Wang (2019), but, still it is lacking of a long term historical perspective, it doesn't precisely reconstruct the development and the begetting of the Chinese industrial heritage understanding and it mainly focused on the management system, with an obvious temporal limit of the research which doesn't take into account the latest national legal tools and the lists issued by the Ministry of Industry and Information Technology.

industrial heritage protection and management's practice from a national level perspective. The most recent literature is mainly focused on isolated local case studies, without assuming a national perspective on the industrial heritagization experience, or it is composed by fragmented studies which indagate the national industrial reuse practices, the management aspects or the industrial tourism effects, without contextualizing the perspectives in a comprehensive national heritagization framework. Moreover, what it missing within the Chinese and international scientific literature is an updated picture of the *status quo* of the labelled industrial heritage, in light of the national lists, and a comprehensive reading of these data within a national framework of policies, regulations and practice. This study would aim to reduce these lacks within the international literature to the scope to provide a comprehensive narration of the entire Chinese industrial heritage discourse's development- from its early scientific and academic debates until the achievement of a national standardized practice regulated by specific legal tools- offering an updated and completed tool of a census and a database of all the 164 industrial heritage sites listed by China to be protected at national level.⁴

In this study, the Chinese industrial heritagisation⁵ experience is indagated as a peculiar practice which originated from local-governments experiences, often adopting international practices as models, and evolved into a national standardized procedure, responding to the specificities and to the needs of the Chinese cultural heritage discourse and of the urban context. Considering the evolution of the Chinese practice and its intertwining development through transnational contacts and local experiences, the methodological approach adopted by this research makes use of different scales to read the Chinese industrial heritage phenomenon. The beginning of the practice is red through

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⁴ This study and the data collected by the census and the database have as temporal limit December 2020. The research is based on the industrial heritage sites listed by the Ministry of Industry and Information Technology starting from December 2017 to December 2020. The research doesn't take in to account- due to the temporal limit of the PhD program- of the last Fifth List issued by the Ministry of Industry and Information Technology in November 2021.

⁵ In this study the concept of "heritagization" is understood, as theorized by Fontal and Gomez-Redondo (2016), as cultural phenomenon shaped and embodied by different agents. "It is both a process and a product where both things are built simultaneously —a product that is not a material output but a cultural node, a set of norms, conducts, beliefs, attitudes...that develop and acquire meaning in a heritage setting" (Fontal and Gomez-Redondo 2016). Considering all the discourse on industrial heritagization in China indagated by this study, the heritagization of industrial legacy is conceived as "a construction of heritage- not only in terms of physical provision but in terms of attribution of meanings" a heritage legitimized by institutions which is built on legitimized values recognized by these authorized institutions.

an international lens in order to clarify the transnational actors and models which contributed to the evolution of the Chinese heritage values' understanding. Adopting an international perspective, it was possible to reconstruct the international debate on heritage, joined by China starting from the Eighties, to understand the role of China within the international discourse and to recognize the key scholars which contributed to evolve the Chinese theoretical framework and practice on cultural heritage. Once the values adopted by the country have been clarified, the research adopted a local perspective, focusing on the local government practice at the beginning of the 2000's. At the end of the narrative process in reconstructing the cultural and industrial heritage development path in China, the research assumed a national perspective lens to read the begetting, the formation and the results of the industrial heritagization process and practice in China.

This research has to be red and understood within a special joint PhD research project within two top universities such as Politecnico di Torino and Tsinghua University of Beijing. Agreed in 2018, this Joint PhD research program "Architectural transnational models in a globalized world" sees in 2022 the completion of the first academic cycle with the author and her colleague Huang Yetong as the first two PhD candidates to conclude the program and defense their research works. The program, in fact, has implied the collaboration of two PhD candidates on transnational architectonical themes, requiring them to spend a total of 18 months in respective hosting universities. The author was supposed to spend 18 months at Tsinghua University, Beijing, and Huang Yetong to spend 18 months at Politecnico di Torino. The mobility periods were organized in order to fulfill the requirements in terms of courses, credits and papers foreseen by the two academic institutions. The author spent the second semester of A.A. 2018-2019 at Tsinghua University (February- July 2019). She was supposed to complete the mobility period during the A.A. 2019-2020 but, due to COVID-19 pandemic, it was not possible and the subsequent academic activities and the research work were held on-line. The author was finally able to go back to China in September 2021 and- after the quarantineshe was in Tsinghua University during the first semester of A.A. 2021-2022 (October-May).

Given the framework of the joint PhD program, the research work has to be read and interpreted by an international perspective. So that, the research questions which guided the development of the work were born within an international context of study which,

among the specific field of the industrial heritage studies⁶, wanted to indugate the recent industrial heritagization practice experienced by China to fill the gap in the international scientific literature missing of latest Chinese industrial heritage researches.

The research first moved by a very simple, but crucial, question: "how is it possible to officially identify industrial heritage among the Chinese cultural heritage?". In order to understand the legal and administrative framework within which to read the industrial heritage, in the first part the study presents the historical evolution of the cultural heritage conservation practice in China through the lens of the law, the administrative system, the international commitment and the international project of China Principles. Once the general Chinese legal and administrative system concerning cultural heritage has been clarified, the second part of the research frames out the begetting of the national discourse on industrial heritage within the wider system of the cultural heritage policies, trying to understand the process that brought the country to develop special legal tools and policies to preserve its own industrial legacy. So that, other research questions came up to guide the investigation work: "is China trying to define a legal framework to protect its national industrial legacy as it did for the cultural heritage?"; "which institutions are taking part to the process of protection and management of industrial heritage in China?"; "which are the policies which are playing a crucial role in the Industrial heritage's conservation in China?".

In order to answer to these research questions, the author reconstructed and clarified the theoretical and ideological framework which brought China to consider its national industrial legacy no more as a sign of recession, but mostly as resource which, thanks to new urban governances, can be reused and transformed into flexible spaces with the potential to enhance creative industry and new economies, such as industrial tourism. So

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⁶ The Industrial heritage has a long tradition of study which origins can be recognized on what is now called Industrial Archeology, firstly identified in Great Britain during the Seventies. It slowly became a discipline of study thanks to the European (mostly French and Italian) development of the research work and the conservation experiences. The definition of the study object (industrial heritage) and the enhancement of the industrial heritage studies was supported by the foundation firsts and by the action later of international organizations such as TICCIH (The International Committee for the Conservation of the Industrial Heritage). TICCIH is recognized by the International Council on Monuments and Sites (ICOMOS) as a designated consultant in all matters related to the study and preservation of industrial heritage. TICCIH gad an extraordinary and primary role in the definition of the industrial heritage as objects and discipline. Its most important contribution can be considered the *Nizhny Tagil Charter for The Industrial Heritage*, issued in 2003 and joined by many countries. With respect to the international experiences, China developed a proper path in defining, protecting and managing its industrial heritage some years later the international debate.

that, the author exanimated all the most important policies issued at national level by different governmental agencies in order to track the ideological path which later on became a legislative guideline. In order to understand the path and the regime which bring a site to be labelled as industrial heritage in China, the author tried to describe the selection basis of sites according to the values which have been recognized to industrial heritage over the years by the scholars' studies and which have been later enshrined by official documents.

After that the protection of industrial heritage in China has been tackled, indagated and presented by the study, the author understood that this topic became an important issue that is nurturing the contemporary international debate and, even more important, which represents a new goal for Chinese Government, being object of recent important regulations. At this stage of the study development, another crucial research question guided the last part of the work: "to what extent China is strengthening governance on Industrial Heritage?". The answer to this complex issue was elaborated thanks to the support and the interpretation of the data collected by the census and the database. Translating the quantitative research data into a narrative description of the industrial heritage phenomenon having a clear administrative, juridical and ideological framework as references, gave the author the possibility to demonstrate identity, functions and goals of what it can be defined as a specific Chinese practice in protecting and managing industrial heritage.

The author's interest on the Chinese industrial heritage practice can be traced back 2010 when, during her first travel to China, the visit to the 798 Art District left her amazed about the ability shown by Beijing to redevelop an industrial space. Being her background rooted in Art History and History of Architecture, she finds in Chinese art and creative clusters developed in industrial areas an excellent binomial where to focus her research and work interests. After visiting sporadically China between 2010 and 2012, she definitely moved to Beijing in 2015 where she first worked in 798 Art District and later at the Italian Embassy. Her deep interest on the fast urban and architectural changings of the megalopolis where she was living, pushed her to quit her job position and to focus her attention in answering to some questions, which soon became the driving path of her research work. Moreover, the decision officialized in 2017 by the International Olympic

Committee⁷ to validate the former site of Shougang steel factory, into the Olympic venue of the Big Air discipline for Beijing Olympic Winter Games 2022, represented a strong incentive on the necessity of this study at this stage of the national industrial heritage practice.

Structure of the study and methodological approach

This research has to be read within an intersection of disciplines. Being the background of the author rooted in Art History and History of Architecture, the research work has been conducted through the use of different historical and juridical sources along with different approaches and frameworks related to the heritage studies. The study made large use of the existent literature to frame out the historical contexts enriching them with interviews to key actors, personal experiences and involvements in projects, survey and field work (just for the city of Beijing). The qualitative research has been combined to a quantitative research approach which saw the collection of the data of all the 1648 industrial heritage sites protected at national level within a census and the development of a database. This study and the data collected by the census and the database have as temporal limit December 2020. The research is based on the industrial heritage sites listed by the Ministry of Industry and Information Technology starting from December 2017 to December 2020. The research doesn't take in to account- due to the temporal limit of the PhD program- of the last Fifth List issued by the Ministry of Industry and Information Technology on November 30th 20219. The quantitative research is accompanied by the

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On October 2nd 2017, the Olympic Games Department of the International Olympic Committee send a document (Ref. n. 2017/ CHD/ PDY/gdx) via email to the Executive Vice President of the Beijing Organizing Committee for the 2022 Olympic and Paralympic Winter Games- Mr. Zhang Jiandong- in which it was approved the location for the Big Air Venue in Shougang Park. In the document it is specified that "The Executive Board noted on articular the exceptional post-Games legacy of the site and of the remarkable ambition supporting the renovation of the entire Shougang Park". Another item presented to the Executive Board were the plans for the sustainable development and post-Games use of Yanqing zone".

⁸ Due to the temporal limit of the Joint PhD program (which, according to the Italian Law and Politecnico di Torino and Tsinghua University of Beijing joint agreement, lasted until January 31rst), the author did not consider in this study the Fifth List issued by the Ministry of Industry and Information Technology which has been published On November 30th 2021. The Fifth List is composed by 31 sites, so in January 2022, the updated number of the total amount of industrial heritage sites protected at national level in China is 195 ("Announcement of the Ministry of Industry and Information Technology on Publishing the Fifth Batch of National Industrial Heritage List", MIIT, Letter [2021] No. 332).

⁹ See "Announcement of the Ministry of Industry and Information Technology on Publishing the Fifth Batch of National Industrial Heritage List", MIIT, Letter [2021] No. 332.

analysis of the official documents issued by different central agencies in order, once again, to put the census and the quantitative results within a legal and administrative framework which allows to understand the criteria adopted by the central government to identify and manage its national industrial heritage.

The study is structured in four main parts and every section adopts specific sources, approaches and specific methodology, alternating- as previously mentioned- a transnational, national or local-governments perspective in reading the industrial heritage phenomenon in China, on the basis of the aims of the chapters and the conditions in which the author was allowed to conduct the research.

The first part of the study investigates the different stages of the intellectual thought that brought China to formulate the first legislative tools on cultural heritage's conservation practice. In order to understand the key actors of the legal and administrative cultural heritage system it has been crucial to go back to the very beginning of the Chinese heritage professional practice. Thanks to the review and the analysis of the literature available on the beginning of Chinese cultural heritage protection practice, the author investigated the period of the 1920s and 1930s as the crucial innovative and formative decennial which saw the development of the disciplines of archaeology and architectural history, disciplines which resulted as main vehicles for the begetting of the national debate on heritage issues. One of the most important figures, who first recognized the value of ancient Chinese architecture and the need for its preservation, as well as the importance of raising social awareness to achieve its survival, is Liang Sicheng. A first part of the research work offers a commented summarize of his pioneering work in order to understand how his strong ideas influenced the modern theoretical framework of Chinese conservation practice. Liang Sicheng's heritage conservation's concepts permeated to the national law, and some of its pillar statements have been enshrined within the 1982 Cultural relic Protection Law. So that, the study continues with the analysis of the legislative tools enacted by the central government starting from 1931, so even before the foundation of New China. A focus is given to the 1961 Provisional Regulations on Protection and Administration of Cultural Relics before to present a deep analysis of the 1982 Cultural relic Protection Law, issued by the newly established Bureau of Cultural Relics, created in the same year ate the beginning of the Reform Era. As references, this part of the study mainly uses the texts of the laws and the interpretations given by scholars

through the decades. After a deep analysis of the development of the national legal regime on protection and management of Chinese cultural heritage, the point of view of the research enlarges its horizons adopting an international perspective to investigate the involvement of China within the international debate on cultural heritage during the Eighties.

1986 was a crucial year that brought China to renew the engagement with international cultural, scholarly and scientific communities. In 1986 China ratified the World Heritage Convention, joined ICCROM and played an increasing role in ICOMOS. The study follows in detail the role played by foreign institutions such as the Getty Conservation Institute and Australian Heritage Commission within the construction of Chinese modern cultural heritage practice. The collaboration with these international institutions brought to the development of long-term projects and to the enactment of China Principles in 2000 and to its second revised edition in 2015. The study clarifies the different positions assumed by Getty Conservation Institute, State Administration of Cultural Heritage and Australian Heritage Commission in drafting China Principles, the first set of Chinese's heritage professional rules. The methodological approach used in this part of the study saw the analysis and the comparative studies of the charters and the direct interviews to the main actors of the drafting process: Doctor Martha Demas and Doctor Agnew Neville as main interlocutors from the side of Getty Conservation Institute and Doctor Sharon Sullivan as representative of the Australian Heritage Commission. Since the model adopted for the formulation of *China Principles* was the *Burra Charter* (instrument of the ICOMOS Australia), the author investigated how this document has been interpreted and readapted in China within a transnational interpretation framework of the heritage conservation practice. At the end of this part, China Principles 2000 and the revised 2015 version are analysed as first sets of professional, non-regulatory guidelines for the People's Republic on protection of cultural heritage, tools that inspired the 2002 amendment of the Law of the PRC on the Protection of Cultural Relics and which first¹⁰ labelled industrial heritage as a category of the cultural heritage which should be considered within the protection practice.

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¹⁰ The commentary of the 2015 edition of China Principles was among the first documents in China to define and label industrial heritage as a new category of cultural legacy.

The chapter is closed by the analysis and the description of the current status of cultural heritage's legal and administrative system in China.

Adopting the same methodological approach used for the first chapter, in the second part of the study, the author tried to reproduce the discourse on industrial heritage, framing out the theoretical, ideological and political frameworks which China developed over the decades to find a common ground in defining industrial heritage as a specific label of its heritage.

Considering the process of speedy urbanization and deindustrialization which has interested China, the industrial heritage emerged as a hot issue which attracted the attention of scholars, government and institutions. The industrial legacy in China, considered now as resources to be regenerated and transformed into flexible spaces with the potential to enhance creative industry and new economies, not only it represents a new goal for Chinese Government but it is also an important academic issue which is objiect of national debates and researches.

Given these evidences, the second chapter tries to reproduce a comprehensive discourse on industrial heritage in China from the point of view of its historical evolution, its legislative regulations and its contemporary practice. The discussion starts from some relevant premises on Chinese industrialization development which was essential to understand the composition, the nature and the history of China's industrial remains. The argumentation continues enlightening the evolution of Land Politics in urban China during the Reform Era, to find out how the land became the most important resources at disposal of the local state administration and budget. So that, the chapter proceeds in demonstrating how the creative industry model has been strongly supported by Chinese local states to reuse industrial remains in central urban areas increasing the profit by the land use rights. After an overview on the local pioneering practice of Shanghai, Beijing and Guangzhou which developed their own dedicated policies, the chapter investigates the development of industrial heritage protection strategies and policies at national level to arrive to define the establishment of a new heritage category and its nowadays protection, reutilization and management process. Adopting a local-government interpreting lens, the cases of Shanghai, Beijing and Guangzhou have been studied mainly through the review of the existing literature on the topic of creative industries and industrial heritage. It has to be specified that, due to the pandemic, the author was not

able to conduct a proper field work in Shanghai and in Guangzhou, but she made a large use of local regulations and policies as main sources.

For what concern the case of Guangzhou Pearl River Piano Factory, being the author directly and personally involved in the development of the projects conducted by Politecnico di Torino, she was able to collect data over the years and to follow the process she described in the study. Beijing case represents a special study case since the author has been living and working in the Capital for many years. To conduct the research work on 798 District the author used literature review, personal contacts with people working there at the beginning of 2000's, site visits and interview to the artist Huang Rui who was among the key actors of the bottom up process which saw the conversion of the industrial plant into an art district.

After the case studies of Shanghai, Beijing and Guangzhou, chosen on the basis of being pioneer cities which developed local policies to protect and industrial legacy and to reuse it through the enhancement of creative economies, the research changes again the perspective to assume a national level interpreting lens to investigate on policies and regulations, to the scope to enlight how China legally defined the category of industrial heritage.

For this part of the study the author translated from Chinese to English the most important documents issued by central government' agencies dealing with the issue of industrial culture and industrial heritage; the analysis of these documents and their commented interpretation was elaborated within the evolution process of Chinese ideology in strengthening the promotion of industrial legacy. The evolution of the ideological and political framework on industrial heritage in China has been traced on the basis of three important documents: the *Guiding opinions on promoting the relocation* and transformation of old industrial zones in urban area; the Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture; the Guiding Opinions on promoting the development of Industrial culture. These documents represent the premises to the Interim Measures for the Administration of National Industrial, the national regulation issued in 2018 by the Ministry of Industry and Information Technology to standardize a national practice to identify, protect and reuse the national industrial heritage. The chapter is closed by the analysis of the industrial heritage's legal and administrative regime ruled by Interim

Measures and clarifying the national policy.

Once the evolution of the ideological and political framework has been described and the national legislative tool have been explained, the third chapter shows the process from the point of view of the practice and portraits the status quo of the listed industrial heritage. Once again, the interpretative lens adopted in this part of the study is the national level one. The aim of this part of the research is duale: to clarify the identification and management practice adopted at national level by the country and to collect the data of the already identified national industrial heritage sites into a census. The methodology adopted to conduct this third part of the research is both qualitative and quantitative. The main research source for this part of the study is constituted by the four official lists of national industrial heritage sites selected by the Ministry of Industry and Information Technology from 2017 up to 2020. The author translated the lists and organized the data within a table composed by five columns. The first column presents the identification number of the industrial heritage site as officially reported in the ministerial lists. The second column indicates the name of the site, while the third reports about its exact geographical location within the Chinese territories. On the fourth column are registered all the industrial remains of the siets, while the fifth column presents some historical notes which help to better understand the industrial remains listed in the fourth column and to contextualized the historical, social and cultural and artistic values of the industrial heritage sites. While the first four columns (serial number; site's name; address and industrial remains) are directly translated by the author from the official lists, the contents of the fifth column has been integrated by the author to enrich the understanding of the lists and to help to contextualize the choices of the sites among the lists. The "notes on heritage values" have been collected through the official web sites of every single industrial site and double checked by the author comparing that information with "Industrial Heritage Network" web portal¹¹.

The census intends to present a comprehensive picture of the status quo of the listed industrial heritage in China in order to demonstrate the progresses made by the country after a long incubation of regulations and debates. The result of the census shows that the industrial heritage conservation phenomenon in China, updated to December 2020, is

¹¹ Industrial Heritage Network: http://www.dayexue.com/Article/Index.html

embracing a total number of 164 sites listed as nationally relevant.

To the extent to make the census a useful tool for further studies, the author elaborated the information into a synthetic database [Annex 1] which allows to adopt a quantitative methodology to read the industrial heritage phenomenon. The database is a Microsoft Excel table composed by eleven voices. The first column presents the progressive number of all the sites in order to give to each industrial heritage a specific identification number independently from the lists it belongs. The second column contains the number of the list to which the site belongs, while the third column registers the identification number of the site as it is coded by the ministerial lists so it is always possible to precisely identify a specific site and relate it to the official documents. The fourth column is presenting the name of the site as it has been translated by the author on the census, giving the possibility to always refer to all the sites in both the documents through the use of the same identification number and site's name. The fifth column shows the geographical location of the sites indicating the administrational region or municipality the sites belongs. The sixth and seventh voices are referring to the foundation date of the industrial plant, respectively indicating the exact year of the establishment of the complex and the industrial historical period the site is belonging. The historical periodization will be useful for a latter elaboration of the data to the extent to understand how the listed sites are distributed in term of historical periods and which stage of China's industrialization history is better represented. The eighth cell is indicating the typology of industrial production the site is representing. The latest three columns are containing precious information to a better understanding of the Chinese industrial heritage phenomenon: the ninth cell is reporting the private or public (State or local-state owned company) ownership of the industrial heritage site. The tenth voice specifies if the site has been already labeled as national key cultural relic or if it is considered Intangible heritage site. The last column is reporting data about the reuse of the industrial site whether it has been, or it is in process to be, regenerated in an industrial park or if it is part of an heritagization project. Also in this case, to fill the information regarding the history of the site, the property and it's heritagization status, the author used web site sources accessing to the official web site of the local governments where the sites are located and double-checking the info through the Industrial Heritage Network and the website's pages of the single industrial sites.

If the census gives a more precise picture of every single industrial heritage site listed, the database allows to obtain a national image of the Chinese industrial heritage, elaborating the data collected into numbers, percentages and graphics, mapping the geographical distribution of the sites, diagramming the historical periods of the Chinese industrial history and picturing the nowadays status quo on the heritagization process of the national industrial legacy. The quantitative data and the graphics have been obtained by the author using Microsoft Excel program.

The last part of the study is dedicated to wrap up all the issues questioned and analyzed by previous chapters, contextualizing them on the real national practice, to the extent to read them through a comprehensive national lens. The aim would be to use all the theoretical framework built up by the previous chapters to analyze the data collected by the census and the database in order to make them speak clearly about the nowadays heritagization process of industrial remains. The first part of the fourth chapter questions the data collected in the census, translating the quantitative research data into a narrative description. The analysis of the data collected in the third chapter, read through the lens of the administrative, juridical and ideological regimes studied in previous chapters, will try to demonstrate identity, functions and goals of what can be defined a peculiar Chinese practice in protecting and managing industrial heritage. This last part of the study will try to translate quantitative data of the census into a comprehensive understanding of China's industrial heritagization model. The model would like to demonstrate the relations between the development of policies in response to social and urban needs, within a precise ideological framework (Made in China 2025 and the latest document *Implementation plan for promoting the development of industrial culture (2021-2025).* This ideological framework acted, through the years, as a big theoretical box where to contextualize and give meaning to the promotion and to the enhancement of the Chinese industrial culture and industrial spirit, in order to obtain bilateral effectiveness in: 1. developing creative industries (to support the transformation of industrial sites); 2. sustaining urban regeneration (increasing the land use and the value of the land in central urban areas); 3. developing the industrial tourism in order to economically sustain the entire process and model.

CHAPTER 1 REPRODUCING THE DISCOURSE ON CULTURAL HERITAGE IN CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATIONS AND MODERN VALUES

1.1 The seminal influence of Liang Sicheng on heritage conservation practice in China

1.1.1 Chinese Architecture and Architectural History in the early Twenty Century

It is no possible to face a discourse on Chinese heritage conservation practice without the understanding of the evolution of Architecture and Architectural History as disciplines among Chinese intellectual society during the early Twenty Century.

During the Imperial time, the education system was strictly controlled by the central government, the imperial administration was sustained itself by education and civil examinations. The study of classics was an incontestable pillar of the Chinese education, having Confucianism as intellectual basis which, for more than two thousand years, acted as a justification to shape China's family, society and State structures (Wang, 2018). Within this Confucian scholarly tradition, disciplines linked to practical aspects are conceived as separated from, and less important than, contemplation of universal principles. This dual intellectual conception was clearly reflected in the composition of the society which saw the high social position of the literati class as opposed to the low social position of craftsmen, within a social hierarchy justified by Confucian philosophy. As consequence, the Chinese educational system intentionally distanced itself from the goal to educate intellectual ranks to technical and practical knowledge. (Li, 2003).

It is reasonable to conclude how, for more than two thousand years, Architecture- as construction practice-, in China has been seen as a matter of manual skills rather than a form of beauty and intellectual issue¹. On the contrary, Chinese epigraphy, calligraphy,

¹ On the evolution of Architecture and History of Architecture as discipline see the comprehensive study proposed by Nancy Shatzman Steinhardt in her 2014 essay: "Chinese Architectural History in the Twenty-First Century". On the

and painting have always been privileged activities for the literati. Earlier dynasties attributed to them values and appreciation and put them at the same level with poetry and other literary works, providing the basis for the persistence of Chinese traditional cultural spirit. Architecture, as artistic expression of a technical knowledge, has been seen as the result of the evolution of skilled craftsmanship for millennia (Kvan and al. 2008). Moreover, in premodern China, it was the central government to control and strictly regulate all institutional and religious constructions. In order to standardize construction rules, imperial courts commissioned to high rank officials the writing of construction manuals.

In 1918 Zhu Qiqian, a politician, scholar and collector, discovered, the *Yingzao fashi*, a construction manual which changed the course of the perception of Chinese Architecture².

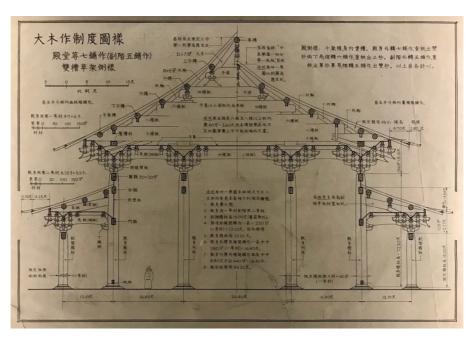


Figure 1.1 Liang Sicheng. Annotation on Yingzhao Fashi (Vol. I), Rules for structural carpentry, fig. 14 (Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exbition, Tsinghua University Art Museum, Beijing, 2021/08/10-20.

role of the Architect as a new professional figure in Chinese modern society see Kvan et. al "The emergence of a profession: development of the profession of architecture in China" published in 2008.

² A comprehensive study on the meaning and the perception of the *Yingzao fashi* in the 1930's is the one proposed by Li Shiqiao in his essay "Reconstituting Chinese Building Tradition: The Yingzao fashi in the Early Twentieth Century".

The *Yingzao Fashi* was written by the assistant director of the Office of Public Works, Li Jie (d. 1110), which operated at the imperial court of the Northern Song Dynasty for thirteen years. The conceptual core of the book is the so called "timber unit" which determines modular systems for all timber components of the building. On the basis of the "work unit" the manual specified the standard amount of labor required for all kind of construction work and the quantities of materials needed. As noted by Li (2003), this text was crucial since it provided a comprehensive record on of Northern Song Dynasty's building construction methodology, having the modular system at the basis of the Chinese construction. The book resulted even a more precious source on Chinese architecture thanks to the combination of information presented both by the text, but mostly important, represented by drawings and graphic solutions such as orthographical projections of plans, elevations, sections, close-to-axonometric views (Li, 2003).

As a manual of construction of imperial palaces, the *Yingzao fashi* was not the only construction manual known at the time of the discovery, but - for sure- this finding represented a turning point in the perception of Architectural History as a discipline in China. As stated by Shatzman Steinhardt (2014), three main concepts tackled in detail in *Yingzao fashi* have had a wider impact on the understanding and on the study of Chinese architecture, since the First Generation's³ contribution to the discipline: the modular basis, the differentiation of high- and lower-ranking buildings and bracket set formations. The study of bracket system brought the discourse of Chiense architecture to a sophisticated literary level and this was what scholars needed at that beginning of the XX century in order to endorse the high dignity, style and history of Chinese architecture in response to the spreading of western taste. Chinese scholars were trying to defend a national culture, finding in its own roots a new beginning to contrast Westernization of the culture, style and taste. This feeling is well represented by Liang Sicheng words: "We have our traditional customs and taste: our family organization, our living standard, work, and

³ The so called "first generation" referred to a group of architects which, returned from their studies abroad (America or Japan) during the Thirties, founded the modern Architecture as discipline officially opening Schools of Architecture in the most important Chinese universities. Returned in China, and trained abroad with rudimental notions of architectural preservation, they started to look and study the Chinese ancient architectural remains, writing about them in a historical narrative, promoting the first restoration of China's most significant architectures. The "first generation" group of architects was so composed by: Liang Sicheng (1901-1972) his wife Lin Huiyin (1904-1955), Yag Tingbao (1901-1982), Tong Jun (1900-1983) and Liu Dunzhen (1897-1968) (Shatzman Steinhardt, 2014).

recreation, as well as cooking, sewing, interior décor of calligraphy and painting, outdoor gardens and plantings, none of them the same as for a Westerner. Our architecture used to be the overall expression of all these elements of customs and taste. We do not need now to cut our feet to fit into European or American shoes, or force our lives to comply with European and American arrangements, or overturn the function of European and American architecture" (Liang, 1944).

The intellectual and political struggle and the feeling of a needed cultural transformation erupted in events such as the Hundred Days' Reform (1898), the Boxer Rebellion (1900), the Republican Revolution (1911), and the May Fourth Movement (1919). The intellectual interest in Chinese architecture found its roots within these premises, raising in Twenties and Thirties in a very challenging context.

As reported by Li (2002), at the turn of the Twentieth century China faced a contraction from being "all under the heaven" (*tianxia*) to being "a country in the world" (*guojia*). The very important cultural shift which elevated the Architecture at the level of an academic discipline lays in the new consideration of the Chinese history within a global geography and an historical time. The pioneering work of Liang Qichao⁴ [Figure 1.2] tried to merge the new knowledge coming from other cultures, with the need to maintain and strength a national identity in rooted in traditions (Li, 2002).

⁴ Liang Qichao (1873-1929), father of Liang Sicheng, was a scholar who lived and served during the late Qing dynasty and the early Republic of China, described as the "mind of modern China". After serving the moribund Qing dynasty he was in exile in Japan where he had the chance to study western culture though Japanese sources. Li (2002) address to Liang Qichao these words: "Although ambivalent toward political revolutions, he nevertheless inspired a new generation of intellectual revolutionaries; he played a part in Chinese politics as a government minister following the Republican Revolution in 1911. Later in life, he advocated a renewed appreciation of Confucianism, alarmed by the calls of wholesale Westernization in China (1917-1929)".



Figure 1.2 Portrait of Liang Qichao at 56 years old. (Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museum, Beijing, 2021/08/10-2022/05/05).

As a pupil of his generation, Liang Qichao grew up surrounded by a tradition which has, as only reference to a territorial and spatial concept, the idea of "all under the heaven", taking mean within Confucianism. With the conflicts between China and Western powers brought by the end of the Nineteenth century, the traditional Chinese thought started to decline and some scholars begun to think at China as country in the world. To quote Li (2002), "the uneasy dichotomy between rethinking Confucianism and embracing new knowledge was always present" but, at the very center of Qichao's interests, there was the wish to establish new knowledge in China, a knowledge rooted in History and in Geography, within time and space. Within Hegel's concept of the progress of the time trough meaningful development moments and moments of changes, it was finally possible to tackle the ideas of past, present, and future. At the same time, the geographical concepts of the world allow to determine global spatial relations within which history can find connections and explain differences (Li, 2002). So that, Liang Qichao strongly believed on the urgent need of a new historiography, as the most important intellectual achievement among all disciplines, in order to establish a new conceptual framework where to put the new and the old knowledge. Again, as reported by Li (2002), Liang

Qichao in his 1922 pivotal essay, *The Research Method for Chinese History*, he declared that the final purpose of a new Chinese history was driven to finally consider China as a country with its own past, its characteristics, and its geographical position in relation to the world as a whole: "Writing a new history may be said to be the most urgent task for the scholars in our country." Until the end of imperial time, Chinese history was mainly written and conceptualized by historians serving the court, who were considered not only as undoubtfully respected scholars, but also as consultants to the highest ranks of the empire, so they could not be contradicted. But, according to Liang Qichao, these official histories were lacking of accuracy, being mostly focused on biographical stories of single individual rulers without quoting sources. What he denounced as urgently needed was a new way to consider and to write the History of China.

Within this frame and this premises, it is possible to recognize the beginning of the modern study of History of Architecture, a discipline looking for scientific accuracy of the data readable from the built remains of the architectural heritage. Liang Sicheng, and the so called First Generation of architects, brought Chinese Architecture and its History to the attention of the intellectual society, spreading awareness on a discipline that was not considered a discipline itself before. To do that they made the difficult texts understandable in order to use them as historical sources and not only as literature enigmas, combining written sources with the material evidences of the on-site studies.

1.1.2 The Society for Research in Chinese Architecture

The intellectual reform proposed by Liang Qichao adopting a "modern knowledge" as well as a renewal of Chinese traditions using the intellectual achievements of the European Enlightenment as the foundation for a modern Chinese nation-state, the discovery of the *Yingzao Fashi* book, and the flourishing of a common consciousness about the need of studying historical built remains found a common ground in the *Society for Research in Chinese Architecture* (Zhu 2012; Li, 2002; Shatzman Steinhardt, 2014). Founded in 1930 by the retired government official Zhu Qiqian, the Society became the very first official institution advocated to the study of Chinese Architecture which gathered all scholars who later will be recognized as the First Generation of architects and Architectural Historians (Zhu, 2012). Zhu was a capable administrator who first

served the Qing court, but in 1911supported the Republican Revolution; as Minister of Public Works between 1912 and 1916, he got closer to architectural and infrastructural projects he was supervising and occasionally taking part in special government missions. As mentioned before, it was in 1918, during one of these missions, when he discovered the 13th century book Yingzao Fashi. Understood its historical importance as primary source in Chinese architecture, Zhu promoted the accurate restoration of the book and its reprinting in 1925. The manual attracted the attention of scholars and its study developed intertwined researches which linked the most influent characters of the Chinese architectural studies. Among them, Laing Sicheng, considered now as the founder of the History of Chinese Architecture as discipline, was the son of Liang Qichao. Liang Qichao and Zhu Qiqian had a long-standing personal connection since they both served Yuan's governments as ministers. (Li, 2003). Liang Sicheng, at the time, was a young researcher who had a more cosmopolitan education. He went to the Anglican School in Beijing to joint later the Tsinghua College, the school modeled on American high school curriculum which purpose was prepare pupils to study in American Universities 5 (Shatzman Steinhardt, 2002). While he was studying in Pennsylvania he was exposed to a Beaux-Arts approach education [Figure 1.3] where history, design and preservation were considered central disciplines to the study of Architecture (Shatzman Steinhardt, 2014).

⁵ The Boxer Indemnity Scholarships is a program initiated by the United States after concessions by China at the termination of the Boxer Rebellion in 1901. China would pay partial reparations to the United States in the form of scholarships for Chinese students to study in U.S. universities. Most the students which would have study in United States received the equivalent of an American high school education at Tsinghua Preparatory School, a "feeder" into the indemnity program.

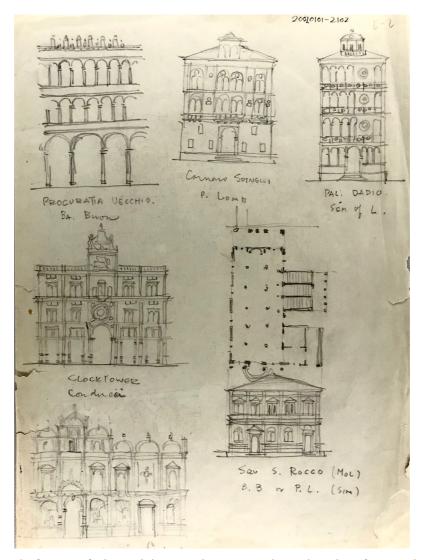


Figure 1.3 A draft page of Liang Sicheng assignment at the University of Pennsylvania, 1925 which show its exposure to the Beaux-Arts educational approach in studying arts and architecture. (Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museum, Beijing, 2021/08/10-2022/05/05).

According to these premises, Liang was more prepared to read western architectural treatises like the ones by Vitruvio and Andrea Palladio, rather than approaching the study of the *Yingzao Fashi*, sent to him by his father in 1925 (Li, 2002). The Thirteenth-century reprinted manual appeared to the scholar, whose architectural knowledge was founded on modern principles (primarily inspired by his own father), a difficult text with inaccurate drawings, to the point of defining it as a "book from heaven". Coming from the Beaux-Arts education, guided by Paul Cret, he believed that drawings collected in the Northern Song dynasty book were not accurate in format, missing the concept of scale and

presenting inadequate annotations (Li, 2002). Returned to China he headed the Department of Architecture at Tsinghua University and launched researches on Architectural History (Shatzman Steinhardt, 2002).

The other scholar who joint the Society for Research in Chinese Architecture and represent, to paraphrase Nancy Shatzman Steinhardt (2014), one of the "Four Outstanding", was Liu Dunzhen, who, after receiving a strong education based on Chinese classical curriculum, went in Japan to continue his studies thanks to a national scholarship. He graduated in 1921 from Tokyo Higher School of Technology receiving an architectonical education based on Japanese and European architectural history and practical design. When he returned to China he funded a program in architecture at Suzhou Specialized School of Technology, program which has been later transferred at the National Center University of Nanjing. This long premise is central to understand the epistemological shift made by Liang and Liu when they joined the Society for Research in Chinese Architecture. Quoting what Fu Xinian wrote in his essay, it can be stated that "the modern study of Chinese Architectural History began in 1930's, when Liang Sicheng and Liu Dunzhen joined and headed the Society" (Fu, 2014).

Within the new historiographical approach fostered by Liang Qichao, the Society for Research in Chinese Architecture's work focus on gathering historical sources and data by doing field research into the rural areas. Liang and Lin combined philological rigor and field work: they paired the study and the analysis of historical texts and manual, doing a big effort on the lexicographical work, with the study on site.



Figure 1.4 Members of the Society for the Research in Chinese Architecture on their field trip to Datong, Shanxi Province. 1933. First from left Mo Zongjiang; second from left: Liu Huiyin: third from left: Liu Duzhen; Photographed by Society for Research in Chinese Architecture. (Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museum, Beijing, 2021/08/10-2022/05/05).

Moreover, the activity of the Society was driven by the aim of clarifying the enigmatic contents displayed in the *Yingzao Fashi*. In order to comprehend the timber frames drawn in the Thirteen century manual and its associated obscure terminology, the researchers first studied the more accessible and readable heritage sites with the Qingdynasty built remains. This brought to the publication, in 1934, of Liang Sicheng's book on Qing construction technology, *Qingshi yingzao zeli* (Li, 2003).

The historical summary of Chinese architecture that Lin contributed to the beginning of Liang Sicheng's book revealed how far the younger researchers had advanced in their understanding of the *Yingzao fashi* within a "historical development" of Chinese architecture.

What clearly made the shift from the traditional historical studies was the field research: crucial to the Society's research work were the several field trips and the discovery of earliest surviving timber structures in China to date. As Liang Sicheng [Figure 1.4] wrote in 1944 "More fieldwork will benefit scholarly research and can also

promote an awareness in society of the need for historic preservation." (Liang, 1944). All the data were than collected and published in the *Bulletin of the Society for Research in Chinese Architecture*, setting new standards for research in Chinese architectural history through precise documentation and description of the remains. Between 1932 and 1937, Liang Sicheng and his team traveled to 137 counties in northern China and meticulously surveyed thousands of monuments dating back to various periods in Chinese history, publishing them in the quarterly bulletins of the Society (Demas and al., 2014).

At the highest pick of its activity, the Society organized an impressive exhibition as part of an architectural event in Shanghai in 1936. More than ten models, sixty drawings, and three hundred photographs documenting recently discovered ancient buildings were displayed for the occasion. On display there were also Liang Sicheng's *Qingshi yingzao zeli* publication and the *Bulletin of the Society for Research in Chinese Architecture*. The exhibition was recorded as containing an "enormous mass of information, indispensable for anyone wishing to penetrate beyond the surface of the subject" (Li 2003).

With such impressive work from the society, our knowledge of Chinese architecture owes a fundamental debt to the research accomplished between 1930 and 1937 by the Society for Research in Chinese Architecture.

1.1.3 Liang Sicheng and his pioneering work in heritage conservation

The culmination of Liang Sicheng's research activity can be recognized on the completion of the annotations of the most part of *Yingzao Fashi* [Figure 1.1] and the writing of a manuscript on Chinese Architecture both in English and Chinese. Unfortunately, none of the scholar's work were published during his lifetime. There has been an unofficial print [Figure 1.5] of the Chinese version of his architectural manual, *Zhongguo jianzhushi*, as support for his teaching activity in Tsinghua University in 1950, while the English version, *A Pictorial History of Chinese Architecture*, was printed by MIT Press in 1984⁶ (Li, 2002).

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⁶ Pictorial History of Chinese Architecture. By LIANG SSU-CH'ENG. Edited by WILMA FAIRBANK. Cambridge, Mass.: MIT Press, 1984. xxiv, 201 pp. Maps, Bibliography, Index, Glossary, Illustrations.

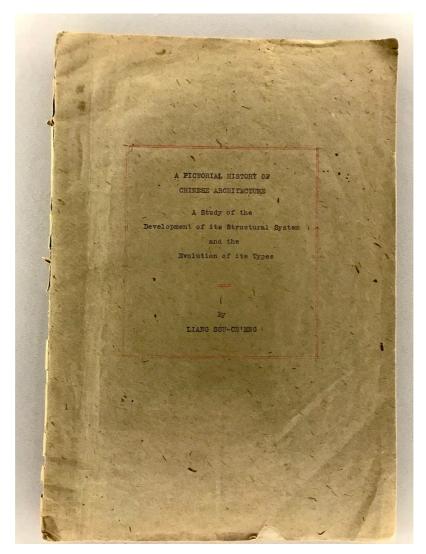


Figure 1.5 Liang Sicheng, A pictorial History of Chinese Architecture, typewritten English-language manuscript. Completed in 1946. Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museu Museum, Beijing, 2021/08/10-2022/05/05).

Despite his unlucky destiny on publishing his writing, as well reported by Shatzman Steinhardt (2002), his work received the attention of both the national and international intellectual scene. His achievements received recognition in 1946 by invitation to found the School of Architecture at the prestigious Tsinghua University, considered as the MIT of China. Founded in 1911 with funds awarded to China after Boxer indemnity, Tsinghua University born primarily as ad preparatory school for Chinese students to be sent abroad to study, the school attended by Liang Sicheng himself. In 1928 the School became the National Tsinghua University, having its research Institute opened a year later. The

curriculum provided on the one hand a rigorous training according to the classical Chinese educational system, on the other a Western humanistic culture was also offered. The program was designed by four of China's greatest and most forward-looking thinkers of the late nineteenth, among which Liang Qichao is worthy to mention. It is not by chance that Liang Sicheng founded its Architecture Department which has a long-established reputation since then.

Among the other international recognition which Lian Sicheng obtained there are: invitation as lecturer at Yale and Princeton, an honorary Doctorate issued by Yale University in 1947 and, in the same year, the invitation to take part, representing China, to the design of the headquarter of the United Nation along with the most important international exponents of the Modern Architecture [Figure 1.6] such as Le Corbusier, Mies van der Rohe and Walter Gropius, just to mention few of them. (Li 2002).



Figure 1.6 Liang Sicheng discussion the design for the United Nations Headquarter with famous architects in New York. 1947. (Source: Liang: the Overarching — A Documenta Celebrating Liang Sicheng's 120th Anniversary, Exhibition, Tsinghua University Art Museum, Beijing, 2021/08/10-2022/05/05).

One outstanding feature in Liang Sicheng's writings on Chinese architectural history is a conception of historical knowledge of Chinese architecture through greater accuracy of documentation and delineation of historical development. This seems hardly remarkable today, but it had a profound meaning for early-twentieth- century China. At the center of this historical knowledge is the crucial notion of verifiable "historical facts"-inherited by his father's theory- and their connections as the foundation of history. In his *Architecture and Restoration Plan for the Temple of Confucius*, Liang Sicheng remarked that "the only objective past repairs was to replace the old building with glorious and sturdy new building; if this meant demolition of the old building, it would be all more praise-worthy as virtuous achievements high order". His proposal for the restoration of Temple of Confucius, Liang Sicheng continued, aimed to maintain the old buildings as they were (Zhu, 2012).

Among Liang Sicheng's major contributions there is, without any doubts, the introduction of modern heritage preservation concepts in China. His theory of conservation recognized two important moment of the methodological approach for the study of buildings: on one hand he emphasized the understanding of the deterioration causes thorough accurate investigations before to proceed to develop a plan of intervention; on the other hand, he formulated concepts for the preservation (Demas et al., 2014). He brought forth the historic and aesthetic values of ancient buildings, which represented a new way of valuing Chinese architecture, through the direct study of the physical remains: "Without objective criteria to assess the value of the world's essential artistic creations for their protection, most of them might well have been destroyed whenever power changed hands or taste changed direction" (Liang, 1944).

It can be stated that the two main concepts on heritage conservation introduced by Liang are embodied in two key phrases: "keeping the present condition" (xianzhuang) and "restoring to the original condition" (yuanzhuang), phrases that are still widely used today in conservation field in China.

The choice between conserving a building as found, the present condition, or restoring it to a known earlier state has been debated, especially in the western cultures, for well over a century; the debate begun by John Ruskin, but in China it was Liang who had the privilege of confronting this problem for the first time. Liang ultimately came

down in favor of retaining the present condition and respecting a building's aged appearance (the monument as a witness to the past), which he contrasted

with the traditional practice of restoration through repainting that resulted in 'a completely bright, new look' (the monument as a re-creation of a past whose traditional context no longer exists).

Liang Sicheng not only instilled the very first seeds of the heritage conservation practice and debate in China, but - through his writings and his research methodology- he arose the awareness on heritage protection. In 1944 in the 7th volume of the *Bulletin of the Society for Research in Chinese Architecture*, when the journal reborn after seven-year hiatus, Liang Sicheng wrote: "If we awaken society by means of academic research and study and encourage the inclination to protect and preserve Chinese architecture, we might gradually reduce, if not completely stop, its destruction." (Liang, 1944)

And again, in his writings he used to raise the feeling of scientific approach needed for the study of the ancient remains: "Not only can new Chinese architecture and urban planning emerge, but they also are expected to produce astonishing achievements. With this expectation in mind, we should prepare by gathering and organizing, insofar as we can, materials worthy of reference. An immediate imperative is to keep a systematic and methodical record of representative architectural remains in measurements, drawings, and photographs." Another important inheritance that the contemporary conservation practice finds in Liang Sicheng work is his pioneering systematic way to record architectural remains. As student educated on Beaux-Artes tradition [Figure 1.3], he found on drawing, especially on watercolors, a way to represent and record architecture; but it was the photography which Liang saw as a reliable technology to provide visual documentation with a third dimension. Although they did not replace drawings and diagrams, photographs helped to enhance and explore the sense of objectivity in Liang's visual analysis of building structures. To Liang, the primary goal of the study of Chinese architecture was to reconstruct its history by exposing the main skeletal structure and examining its stylistic features and changes over time. His use of diagrams, drawings, and photographs was to visualize and articulate this particular aspect of the building tradition in ancient China (Lin, 2011). In one of his writing, in 1944 Liang stated: "Thus the study of the Chinese building is primarily a study of its anatomy. For this reason, the section

drawings are much more important than the elevations." (Liang, 1944). Liang Sicheng's use of the Beaux-Artes techniques of presentation, with their endless capacity to absorb stylistic and cultural differences, served the same purpose of seeing Chinese architecture as situated in a global geographical context and historical development [Figure 1.7]. This placing of Chinese architecture in a global geographical context and historical development leads to Liang Sicheng's claim of Chinese architecture as possessing valuable lessons for the architecture of his time, despite the extensive destruction and the need of a renewal.

As well describe by the study of Wei-Cheng Lin (2011), Liang Sicheng in his fieldwork reports used to produce detailed diagrams in situ, based on investigation, showing the front and cross-section of buildings. Each diagram was accurately reproduce to indicate the position and relation of each component in the overall organic assemblage of the timber-frame structure. While these diagrams are highly abstract, analytical, and two-dimensional, they are validated and substantiated by juxtaposed photographs as published in survey reports (Lin, 2011).

His methodological approach in combining the more traditional architectural drawings and photography, can be seen in the study of the Yingxian Pagoda in Fogong Monastery in Shanxi [Figure 1.7]. The combination of more traditional architectonical drawings with the use of photography was a fundamental tool which supported him to understand the laws of traditional construction technology and brought him to formulate a "vocabulary and grammar of the country's architectonical language" to use his own metaphor. (Liang, 1944).

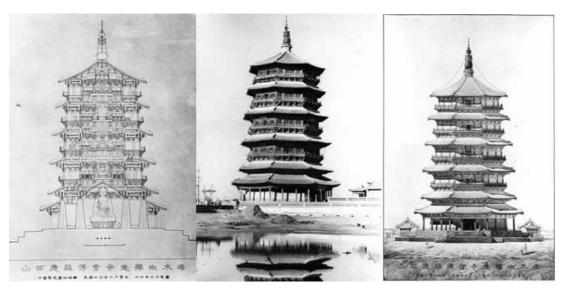


Figure 1.7 Liang Sicheng, Yingxian Pagoda, Fogong Monastery, Shanxi, China (dating to 1056). (Source: Liang Ssu-ch'eng, A Pictorial History of Chinese Architecture (Cambridge, MA: MIT Press, 1984): a) frontal section, 1934, p. 71; b) photograph, 1934, p. 69; c) watercolor rendering, 1935, p. 70).

It is notable that, on such an early stage of his career, Liang realize the importance of education in protection of ancient monuments. In 1932 the scholar published the report of his first architectural field study "Investigation of Guanyin Pavilion and the Gateway in the Dule Temple in Ji County" (*Jixian Dulesi Guayinge shanmen Kao*). As reported by Lai (et. al. 2004), in the last section of his report he put forward some ideas which can be recognize as the very center of his heritage conservation theory: "Among the method of protection, the first is to raise social concern, and let people know the value of architecture. Let people know the value of the Pavilion and the Gateway in Chinese cultural architectural history; this is the root of protection. But this kind of understanding and awareness cannot be achieved overnight. It means raising the educational level of common people, and this is a problem that the architect cannot solve. Thus, for now the most important task is to preserve the present condition of the pavilion and gateway and prevent future damage."

Liang's words can be easily misunderstood as a merely echo of the declarations contained in the *Athens Charter for the Restoration of Historic Monuments*, issued in the same years (1931): "About the role of education in the respect of monuments, the Conference, firmly convinced that the best guarantee in the matter of the preservation of monuments and works of art derives from the respect and attachment of the peoples

themselves; considering that these feelings can very largely be promoted by appropriate action on the part of public authorities; recommends that educators should urge children and young people to abstain from disfiguring monuments of every description and that they should teach them to take a greater and more general interest in the protection of these concrete testimonies of all ages of civilization." On the contrary, it is important to say that there is no record or evidence which confirms that Liang was aware about Athens Charter's content when he published his first investigation report (Lai at al. 2004; Zhu, 2012; Lai 2014).

Following his report on Dule Temple structures- the oldest known wooden buildings at the time of his writings-, Liang recognized that there was a sort of attachment by the community to the monuments, but he also realized that was not enough in order to preserve them in the future. What he put forth was, again, something that anticipated important declarations: the need of adequate laws, the need of the role of government in ensuring adequate regulations and funding for the protection, together with a professional training for those who would carry on any conservation work.⁷

If there could be some uncertainties on Liang's knowledge of the Athens Charter at the time of his 1932 report, there are less doubts about his updating with Venice Charter's statements since after 1950's the scholar had very little professional exchanges with the western colleagues.

The Venice Charter, issued in 1964, emphasizes the importance of historic and artistic values of architectures and monuments and stressed the significance of ancient buildings as authentic sources of the past arguing the need to respect the "valid contributions of all periods to the building" declaring in art. 11 that "unity of style is not the aim of a restoration" (ICOMOS 1964). The most quoted declaration contained in the Venice Charter which states that" the process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins" (Art. 9), echoed Liang's convictions of Dule temple's article: "The problems can be classified into two categories: one is essential repair, and the other is

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⁷ "Although the local people of Ji County have some kind of religious and protective feeling toward the temple, in reality they have no power, no professional knowledge to prevent its misuse and deterioration. (Lai et. al. 2004, 85)

restoration. The damaged parts should be repaired [...]. Those that have lost their original condition (yanzhuang), should be recovered [...] Of the two categories, restoration is the more complicated. Only when the person in charge of the restoration knows the original state based on firm evidence can restoration be carried out" (Lai et al. 2004). Liang's concepts that can be embodied in the two key quotations "preserving or restoring the original conditions" and "Keeping the present conditions" are subjected to the same tensions on the international debate and well exemplified on Venice Charter.

Although Liang Sicheng was confused and mistreated by the new order represented by the Maoist regime, although he fought to the point to risk his life to defend his own ideas against the demolition of Beijing's ancient city walls, and even thou he was accused to be a "right element" by the political order, his ideas were louder and stronger. Liang Sicheng concepts "preserving or restoring the original conditions" and "keeping the present conditions" represented a big inheritance for the future Chinese regulations and laws on protection of cultural relics. Liang's concepts are echoed in all Chinese regulations and laws concerning cultural heritage since the very beginning of a legislation practice on heritage issues. The very first amendment promulgated in 1961, *Provisional regulations on the protection and management of cultural relics*, issued to guide the Nation to formulate the firs proper law (Cao et al., 2018), in art. 11 says: "When it comes to monuments, ancient buildings, caves, engraved stones and sculptures (including elements annexes of buildings) classified as Protected Units of cultural heritage, we will not carry out and maintenance only by strictly complying to the principle of restoring the original state or to preserve the existing state" (UNESCO, 1961).

Subsequently, Liang's concepts were confirmed by the *Circular Concerning the Opinion on Strengthening Cultural Relics Commercial Administration and Implementing the Policy on the Protection of Cultural Relics*, promulgated on December 16th 1974 by the State Council (Murphy, 1995).

The coronation of Liang Sicheng's achievement, the acknowledgement of his pioneering research work on conservation of Chinese cultural heritage can be recognized in art. 14 of the 1982 Law of People's Republic of China on Protection of Cultural Relics which states: "the principle of keeping the cultural relics in their original state must be adhered to in the repairs and maintenance at the sites designated as the ones to be

protected for their historical and cultural value" (Law of the People's Republic of China on protection of Cultural Relics, 1982). In this legislation the two alternative positions stated by the scholar were transformed in one single principle of "not changing the original condition". Since then, this become the most frequently cited principle of conservation, enshrined in the national law.

When Liang began his pioneering work, the values of Chinese cultural heritage laid just on its historic, symbolic, religious association and on community's memorial attachment. Through creating two closely linked branches of study, Architectural History and Architectural Conservation, Liang Sicheng created the grammar and syntax of ancient Chinese architecture, giving birth to a new set of historic, research and aesthetic values based on careful study of the physical conditions of the buildings. Moreover, creating a new scientific system of values and bringing into the Chinese heritage conservation discourse the most updated international issues, Liang conquered a place on the Olympus of the Chinese conservation practice by creating the intellectual premises and having his theories confirmed by the national law.

1.2 1930-1982. Domestic legal regime and management of Cultural Relics in China

1.2.1 1930-1961: a focus on Provisional Regulations on Protection and Administration of Cultural Relics

When the National Government for the Republic of China in 1928, finally completed the formal reunification of China, the Central Antiquities Depository Committee was instituted as the first dedicated institution for the cultural relics management of the Country (Committee for Cultural Policy, 2020). Cultural heritage in China had being endangered from conflicts, illegal excavation, smuggling, illicit trade and destructions since the mid of XIX century and the matter of heritage protection was felt as an urgent issue. In 1930 the Republican Government promulgated the *Law on the Preservation of Ancient Objects*, the first official cultural relics statute in China with the aim to protect cultural heritage (Committee for Cultural Policy, 2020; Su et Chen 2020). This law determined the State ownership of all subsurface property and established the necessity

of a government approval for any excavations and any participation of foreign professional figure (Rogers, 2004). This first statutory was later implemented by different rules and regulations⁸ which can be said as been influenced by Western legal tools on cultural heritage matters, especially for what concern the introduction of disciplinary punishment for responsible officials in case of cultural relics damage due to inadequate protective measures (Committee for Cultural Policy, 2020).

After 30 years, in 1961, Chinese government promulgated the *Provisional Regulations on Protection and Administration of Cultural Relics* (UNESCO 1961), which prohibits the export of any cultural relics dated prior the 1795, and controlling the export of certain relics predating 1911. This regulation recognized for the first time in Chinese history the necessity to protect immovable cultural heritage and established - what became known and which are still in use- the four legal principles for the management of heritage sites: to identify a physical boundary to identify the area of the site, to erect a sign declaring the site is protected, to establish an archive for site's records and to nominate the administrative resources and persons or agency in charge to manage it (Rogers 2004).

The *Provisional Regulations* counts of 18 articles. Particularly important is the art. 2 which defines the five categories considered "Cultural Heritage" which have the right to be protected. This article represents the very first basis for all the next laws and regulations on cultural heritage, which defines the heritage categories within a legal definition remained basically unchanged (Su et Chen 2020). Cultural vestiges to be safeguarded by the State are recognized as follow: (1) buildings, sites and objects of historical interest which evoke great events of the past, revolutionary movements or which presents important characters; (2) sites of ancient cultures, ancient burial sites, old buildings, grottoes and grave stones of historical, artistic and scientific interest; (3) valuable artworks regardless of the time they belong; (4) archives of the revolution as well as old books which present historical, artistic or scientific interests; (5) The

⁸ According to the Committee for Cultural Policy's report (2020), the important cultural property statute and regulations issued between 1928 and 1938, before the outbreak of the Sino-Japanese War, are the following: 1928 Regulations governing the preservation of scenic resorts, ancient remains and relics; 1928 Statute for Preservation of Scenic Sites, Points of Historical Importance, and Articles of Historical, Cultural and Artistic Value; 1930 Relics Preservation Law; 1935 Relics Preservation Law; 1935 Rules Governing the Excavation of Relics.

representative objects which reflect the social system, social production and the life of society at all times (UNESCO, 1961).

Important are also articles 3, 4 and 5 since they first frame the legal responsibilities of the protection and management of the cultural heritage within the public authority. In detail art. 3 establishes the hierarchical relationship between provinces, autonomous regions, municipalities which are responsible of the cultural heritage within the territories under their administrative competences and states that they have to report to the central government. Moreover, in the same article it is specified that wealthy administrative regions, districts and municipalities cultural heritage must set up ad hoc bodies for the protection and the administration of cultural heritage in their respective regions. These local offices will have the responsibility promote study and investigation on cultural relics under their protection authority with the purpose, not only to safeguard it, but also to elaborate and collect data.

The art. 5 institutes that cultural administration departments of at all levels, engaged in a constant research work concerning cultural heritage, will have to select important sites and to classify them- according to their importance- in Protected Unit under the jurisdiction of the municipality level or the province, while autonomous region or huge municipality have to respond directly to the central authority. The fifth continues enlightening the procedure which administrative departments has to follow to officially identify cultural heritage's sites within the territory under their responsibility: district or municipal-level cultural administration department has to choose the most important cultural sites among all the identified relics under their jurisdiction. The listed sites are submitted to the People's Committee belonging to the same administrative level for the approval and, once announced, the list have to be presented to the regional level cultural administration department for the official registration. Same procedure has to be followed at the regional level, which cultural department has to report directly to the State Council for the official registration. The hierarchical system is than completed when the Ministry of Culture will select among the protected cultural heritage units of the provincial level (or autonomous region or municipality directly under the central authority) those sites which present great historical, artistic or scientific value, then submit them in batches will have to be approved by the State Council and subsequent announced as "National Key

Cultural Relics Protection Units".

According to article 5, in 1961 the State Council together with the Ministry of Culture promulgated The First Batch of National Key Cultural Relics Protection Units⁹ a first list of important cultural sites to be protected at National level for a total of 180 sites. In the official notice of March 4th 1961, it can be read "The Ministry of Culture should continue to select cultural relics of major historical, artistic, and scientific value among the provincial (or autonomous region, municipality) level cultural relics protection units, report them to the State Council in batches for approval and announcement, and coordinate with relevant localities and departments to strengthen protection management. The people's committees of all provinces, autonomous regions, and municipalities directly under the central government shall, in accordance with the provisions of the Interim Regulations on the Administration of Cultural Relics Protection organize relevant departments in a short period of time to delineate the protection scope of key national cultural relics protection units in their local areas, make signs and explanations, and gradually establish scientific record files. At the same time, the relevant county and city people's committees should be urged to do a good job in the protection and management of key national cultural relics protection units within their jurisdiction." (Notice of the State Council on Announcement of the List of the First Batch of National Key Cultural Relics Protection Units, 1961).

These sites named on national lists have to be protected according to the four historic rules, dated from the XVIII century, which in the 1961 are finally enshrined by the law. The ancient practice sees the delimitation of the boundaries of the sites to be protected, the erection of a plaque or sign declaring the site protected, the establishment of an archive for records and the designation of administrative resources to manage the site (Rogers 2004).

⁹ The First Batch of National Key Cultural Relics Protection Units published in 1961 is the result of the first campaign of national cultural heritage identification survey promoted by Ministry of Culture during the Fifties and conclude within a decade (Silverman and Blumenfield 2013).

To see the sites listed on the First Batch of National Key Cultural Relics Protection Units see: https://web.archive.org/web/20130921221815/http://www.sach.gov.cn/col/col1613/index.html

1.2.2 1982 Cultural Relics Protection Law. Contents and effectiveness within the issue of managing

Nevertheless, the *Provisional Regulations* were still in vigor, the protection practice of cultural relics was severely interrupted by the central government during the Cultural Revolution, from 1966 to 1976. In order to strength the communist ideology by purging the remains and the memories of the feudalistic Chinese past, the chairman Mao Zedong denounced the cultural and artistic remains as "bad cultures", signs of a past to be deleted, following the diktat "Demolishing the past and building the new" (Agnew et al. 2004; Su et Chen 2020).

After the Open Policy reform initiated by Deng Xiaoping in 1978, China's national focus shifted from an ideological struggle to the economic modernization. The "opening up policy" resulted the catalyst of an endless chain of changes. From the point of view of the cultural heritage, the rapid and uncontrolled urban development had catastrophic consequences on built cultural heritage. The construction exploitations brought to lose much of the built and archeological heritage or to compromise its authenticity because of the not regulated over restorations. Furthermore, the market economy and the ideological shift of the Chinese Communist Party, less struggling on revolutionary rhetoric and more focused on economic growth, entailed to a re-evaluation of the national history. If the maoist era neglected the value of the Chinese heritage reading it as a memory of the feudalism and encouraging his destruction, the "opening up" era increased the re-evaluation of Chinese heritage as a source of national pride and national identity. Starting from the beginning of the 80's a big effort was done by central authorities in listing, protecting and restoring the national cultural heritage (Madsen 2014; Maags and Svensson 2018; Rogers 2004; Richard 2014).

Within the need to protect the cultural heritage from an unstoppable urban growth and the necessity to rehabilitate the national past, in 1982 the Standing Committee of the National People's Congress enacted the *Cultural Relics Protection Law of the People's Republic of China*.

If it does not represent the very first legal tool adopted by Chinese government in protecting its cultural heritage, the 1982 *Cultural Relics Protection Law* still represents the foundation of the nowadays Chinese legislation on the protection of cultural legacy

and exemplifies a benchmark of the Chinese legislative regime on heritage protection¹⁰.

After it came in force, the law has been amended many times (in 1991, 2002, 2007, 2013, 2015, and 2017), adapting its contents to the need of a changing economy and society. When first enacted, the *Cultural Relics Protection Law* was organize in eight chapters for a total of 33 articles: chapter one: General provisions (articles 1–6); chapter two: Entities in charge of the protection of cultural objects (articles 7–15); chapter three: Archaeological excavations (articles 16–21); chapter four: Cultural objects in the collection of public institutions (articles 22–23); chapter five: Cultural objects in private collection (articles 24–26); chapter six: Taking cultural objects out of the PRC (articles 27–28); chapter seven: Rewards and penalties (articles 29–31); and chapter eight: Supplementary provisions (articles 32–33).

If compared to the eighteen articles contained on the 1961 Provisional Regulations, it can be said that no big steps forward have been in done in terms of protection in more than 20 years. The shift was more ideological than practical. The 1982 Cultural Relics Protection law is important because it denies the ten years of disruptions occurred during the Cultural Revolution, enshrining in the law the majority of what declared in the Provisional Regulations. Moreover, if compared to the contemporary international laws on protection of cultural heritage, the 1982 Law demonstrated to be a relatively simplistic legal tool, not capable to effectively deal with the vastness and diversity of Chinese heritage. In any case, before to consider the weakness of the 1982 statute, it has to be recognized at least three important aspects of the law. As first important fact, the law offers the definition and the categories through which identify cultural objects, setting up the main principles for cultural relics protection and attributing to the governments- at all administrative levels- responsibility for the protection and the administration of cultural objects. Secondly, the 1982 Cultural Relics Protection Law recognizes to the state the ownership of undiscovered cultural relics, strongly prohibiting the export without state permission, and, at the same time, allowing for their expropriation in case of illegal

¹⁰ For a comprehensive study on the evolution of the Chinese legal and administration system concerning cultural relics see: Committee for Cultural Policy. 2020, *Global Art and Heritage Law Series. China*.

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export ¹¹. As third important feature, the law acknowledges both the public state-ownership and private ownership for cultural objects (Huo 2016). With reference of this last point, art. 5 says that: "Ownership of memorial buildings, ancient architectural structures and cultural relics handed down from generation to generation which belong to collectives or individuals shall be protected by state laws. Owners of the cultural relics must abide by the relevant state regulations governing the protection and control of cultural relics." As many scholars noted (Huo 2016; Murphy 1995a; Chai and Li 2019) this statement, which remarks the right of private cultural property ownership, represents a very important change in Chinese legislative system.

Among the relevant points carried out by the 1982 *Cultural Relics Protection Law* it is important to mention also the important landmark it set as measure to regulate the speedy expansion and development in urban areas: the state authority designated the new category of immovable cultural heritage under the definition of "cultural city/town/village with important historic and cultural values" (Shen, Chen, 2010).

In terms of conservation philosophy, *Cultural Relics protection Law* seems to be quite vague, but as mentioned above, the article 14¹²pays an indirect tribute to the pioneering work of Liang Sicheng declaring that "The principle of keeping the cultural relics in their original state must be adhered to in the repairs and maintenance at the sites designated as the ones to be protected for their historical and cultural value" permanently officializing in the law one of the core concept of the Chinese cultural heritage conservation practice.

In broad terms, the *Cultural Relics Protection Law* defines cultural heritage typologies, attribute the ownership of the undiscovered movable relics to the State and ascribe the responsibility of the site's protection to the Ministry of Culture at national,

Article 28: It shall be prohibited to take out of the country any cultural relics of significant historical, artistic or scientific value, with the exception of those to be shipped abroad for exhibition with the approval of the State Council.

by the state through purchase.

Article 27: Cultural relics to be exported or to be taken out of the country by individuals must be declared to the Customs in advance and examined by the department for cultural administration of a province, an autonomous region or a municipality directly under the Central Government designated by the state department for cultural administration before export certificates are granted. Cultural relics leaving the country must be shipped out at designated ports. Cultural relics which, after examination, are not permitted to leave the country may be requisitioned

¹² Article 14: The principle of keeping the cultural relics in their original state must be adhered to in the repairs and maintenance at the sites designated as the ones to be protected for their historical and cultural value and in any removal involving these sites, such as sites related to revolutionary history, memorial buildings, ancient tombs, ancient architectural structures, cave temples, stone carvings, etc. (including attachments to the structures).

provincial or county levels; the law establishes various obligations and controls which determine the use, the maintenance and the future development of immovable cultural relics and regulates archeological excavations and trade in movable cultural relics.

Despite the efforts, these measures showed to be too weak to support a national cultural heritage protection system in a changing society during an economic booming.

Among the biggest flaws of the Cultural Relics Protection Law stays the too broader legal definition of what have to be considered "cultural relic". Compared to the 1961 Regulations, no further details have been given and the typology of the heritage is more or less unchanged, just less importance is reserved to revolutionary sites. According to article 2¹³ of the 1982 Cultural Relics Protection Law, Chinese cultural heritage results as divided in two categories: immovable and movable cultural relics. Immovable cultural relics are further categorized into five classes: (1) ancient cultural/archaeological sites, (2) ancient tombs, (3) ancient architectural structures, (4) cave temples and (5) stone carvings and murals (Shen, Chen, 2010). Moreover, article 22 categorizes movable relics in different grades according to their values without giving further details and imposes to draft a not better specify note for the most valuable objects. In few words the 1982 law established a grading system to classify cultural objects in "valuable" and "ordinary", subjecting the two relics categories to different levels of protection. The problem was the lack of precise guideline to establish how to classify a "valuable" relic in order to put it under national protection (Huo 2016). Without any parameters within which to categorize the value of the movable heritage, it was not possible to identify its level of protection, and whereas a cultural relic was identify, this did not mean that it was necessarily put under protection. Being the law so undetermined and weak, it was subjected to different interpretation (Rogers 2004).

¹³ The state shall place under its protection, within the boundaries of the People's Republic of China, the following cultural relics of historical, artistic or scientific value: (1) sites of ancient culture, ancient tombs, ancient architectural structures, cave temples and stone carvings that are of historical, artistic or scientific value; (2) buildings, memorial sites and memorial objects related to major historical events, revolutionary movements or famous people that are highly memorable or are of great significance for education or for the preservation of historical data; (3) valuable works of art and handicraft articles dating from various historical periods; (4) important revolutionary documents as well as manuscripts and ancient or old books and materials, etc., that are of historical, artistic or scientific value; and (5) typical material objects reflecting the social system, social production or the life of various nationalities in different historical periods. The criteria and measures for the verification of cultural relics shall be formulated by the state department for cultural administration, which shall report them to the State Council for approval. Fossils of paleo vertebrates and paleo anthropoids of scientific value shall be protected by the state in the same way as cultural relics.

Unfortunately, the 2002 revision of the law did not solve this problem, contributing, instead, to increase the sense of vagueness further seizing down the "valuable" relics in grade one, grade two and grade tree without specifying precise parameters of evaluation. The lack of a secure categorization system for the cultural relics brought to a lack of certainty on the allocation of responsibility on behalf of the different levels of the administration system (Huo, 2016). This indetermination further brought to the inadequacy to prevent large scale black market of cultural relics (Murphy 1995a; Dutra 2004; Huo 2016, Chai & Li 2019). The law recognized the right to private property of cultural relics but, in subjecting the private property to the State's overriding duty, severely prohibited private sales or exports. According to 1982 *Cultural Relic Protection Law*, if a private owner wanted to sell a cultural relic, the only possible sale could be made to the State: citizens could sell pieces of private collections to stated- owned relics shops which tended to offer very low prices. Putting out of the law the private cultural relics marketing obtained the exact contrary effect: an enforcement of the black market and illicit exportation of cultural objects (Murphy 1995a; Dutra 2004).

A not precise legal definition of "cultural relics" brought also to an inadequate heritage identification process: in 1982, despite having listed more than 300.000 of immovable sites, the State Administration of Cultural Heritage with the consensus of the State Council, approved just 242 sites to be protected at national level, a very small number compared to the rich and diverse cultural heritage distributed in the vastness of the Chinese territory (Notice of the State Council on Promulgating the Second Batch of National Key Cultural Relics Protection Units, 1982)¹⁴.

In any case, even if the survey completed in 1982 did not add a reasonable number of cultural sites to be protected under the national regime, Second National Cultural Heritage Survey and Registration represent the basis of the modern understanding of cultural properties in China, being the first comprehensive census done after Maoist era. The survey included identification and registration of archaeological and cultural sites

¹⁴ Considering the First (1961) and the Second (1982) Batch of National Key Cultural Relics Protection Units, the composition of the list of cultural sites protected at national levels comprehend the following typologies of cultural relics: Revolutionary sites and revolutionary memorial buildings (33+10 in total), Cave Temple (14 in total), Grottoes (5 in total), Ancient buildings and historical memorial buildings (77 + 28 in total), Stone carvings and

and inventories of museum collections all over China. However, due to some difficulties and conditions, the survey could not be conducted in 320 of the 2,650 counties established within the country at that time (Shen, Chen, 2010).

Another flaw which made Chinese cultural heritage protection practice not effective at all in the time of socio-economic changes and urban expansion was the lack of appropriate public budgets for the protection heritage issues. Even if the budget and related matters cannot be considered directly linked to the 1982 cultural relics protection law, this data has to be measured as a consequence of the law weakness. As stated by many authors and well reported by Murphy (1995a), the generally ineffective protection system of cultural relics in China has to consider the inadequacy of funds in relation to the immensity of the task of protection. In 1993 the registered cultural relics (at the three different administrative levels) counted about 350,000 units considering ancient sites, tombs and buildings, grottoes and temples and about 10 million cultural objects in stored among all types of institutions at all levels allover China. For the time and the relatively young legal and administrative regime in cultural heritage protection practice, it represented an enormously big heritage to face with not adequate legal and economic tools. To give an idea about the entity of the problem just consider that until 1992 the funding for cultural patrimony protection was barely the same of the year budget of the Tokyo Museum.

The budget and economic related matters will be later explained within the frame of the nowadays administrative regime which regulate the heritage protection practice. At this stage of the discourse it is enough to consider that this institutional design has been largely responsible for heritage destruction in a time of a booming economy. Having infrastructure construction and urban expansion as economic driving forces, local administrations were conscious about the fact that economic development initiatives would have had negative impact on heritage preservation. But within an administrative system in which the professionals in charge of heritage protection have to respond directly to the major, their power to resist such urban developing projects is very weak; and even in the case they would have tried to stop them, in the very end, being the decision's power in the hands of the mayor, their professional career development and the assessment would have been damaged since they also have to contribute to the economic performance

of the local government, being this one judged by upper level governments (Zan, 2014). So how could preservation issues compete with the pressure of the economic and urban growth if they are part of the same system in terms of budget, control and performances?

1.3 UNESCO, Chinese heritage and international debate

The socioeconomic transformation of the post-Mao era brought by the "open door" policy, took China to face a very complicated scenario on Cultural Heritage protection and management practice. When Cultural Relics Protection Law was firstly enacted in 1982, lawmakers did not expect that complicated situation: the re-habilitation of the private ownership and the resumption of a market economy, the urban development, the labor mobilization and the consequent internal migration became new pressures which endangered sites and objects. The country showed very soon the need of professional trained figures but, in lack of time and resources to implement preservative plans before many sites were lost, Chinese cultural authorities decided to open a dialogue with international communities. This brought China to join international conventions in order to strength and improve the domestic legal and administrative systems. Within this context, on December 12th 1985, the Chinese People's Congress ratified the 1972 UNESCO's Convention Concerning the Protection of the World Cultural and Natural Heritage. Starting from this date China began to participate to the international dialogue on heritage protection, promoting its first six sites in 1986 and having them registered within the World Heritage List in 1987¹⁵, but- it has to be said that- it is necessary to wait until around 2000 to see China as an active member (Lai 2016; Silverman and Blumenfield 2013; Su and Chen 2020). As professor Lu Zhou¹⁶ pointed out "China 's ratification of the World Heritage Convention helped the Chinese system of cultural relics protection to better preserve and manage China 's World Heritage Sites and assimilate into the international system of cultural heritage conservation. It also facilitated the

¹⁵ Imperial Palaces of the Ming and Qing Dynasties in Beijing; Mausoleum of the First Qin Emperor; Mogao Caves; Peking Man Site at Zhoukoudian; the Great Wall; Mount Tai.

¹⁶ Lu Zhou is professor of conservation and the director of the National Heritage Center of Tsinghua University; Vice President of ICOMOS China; he was instrumental in the development of the revised version of the Principles for the Conservation of Heritage Sites in China.

exchange of ideas between China and other countries" (Lu 2016). Nevertheless, China was more a supporting state member rather than a contributing voice to the international discourse on cultural heritage preservation issues. This can be attributed to the fact that Chinese conservation practice was still at the beginning stage and international dialogue on heritage management was happening at an internal dimension with Getty Conservation Institute and Australian Heritage Commission in developing China Principles.¹⁷

To understand Chinese position within the international, and mostly within UNESCO, community, it has to be kept into consideration that the way in which heritage was perceived and promoted by Chinese authorities was pretty different from the contemporary western perception. To cite the exhaustive reading made by Celine Lai (2016) on the relationship between UNESCO and the Chinese way to consider its cultural legacy, "heritage was introduced in China at a time when the country was experiencing a crisis about establishing its national identity, so heritage was first and foremost seen as Chinese heritage, a way to create a sense of shared history and identity through archeology". This can be red both toward the terminology used within the official documents, both through the heritage typologies listed over the time by China. It is interesting to notice how, before China ratified international conventions, the term used to indicate the national cultural legacy was wenwu, which literally means "cultural relic" (Lai 2016). This can be noted also at the legal and administrative level since in 1982 the Bureau of Cultural Relics was founded as specialized national agency dedicated to the issue of heritage protection and management and the Cultural Relics Protection Law was enacted. At that early stage of the heritage discourse, cultural legacy was intended as almost exclusively related to archeological and architectonical remains or archeological and artistic objects with a high historical, artistic and scientific value. Cultural heritage served the ideological reconstruction of a Chinese national identity, especially during the 80's and the 90's. As Shepherd (2009) pointed out, connecting his study with the previous one carried out by Denton (2005), China's first engagement with World Heritage List was strongly linked to a Chinese State-building goal: "Between 1980 and 2000, mirroring an ideological shift from Maoist asceticism and high socialism to authoritarian nationalism,

¹⁷ See the paragraph 1.4 "China Principles Project. Actors and Institutions".

the number of museums in China almost quadrupled, increasing from 365 to 1,353. During the Maoist era, museums shared a revolutionary narrative that emphasized self-sacrifice for the collective good, while built heritage sites that were not directly connected to either the 1911 Revolution or the history of the Chinese Communist Party were either ignored or, during the Cultural Revolution (1966-1976), physically attacked". Many scholars read in this ideological shift a new thought and a new meaning of the Chinese past and cultural legacy: they now served as driving forces to a new national identity building and no more as revolutionary purposes.

The ideological transfer is visible at the terminology level after the term wenwu, cultural relics, started to be replaced with yizhan¹⁹, which, as reported by Lai (2016), literally means "the inherited property", and in English is commonly translated as cultural heritage (Su and Chen 2020; Lai 2016; Li 2020). It is not by chance if the term "heritage" appeared just after China signed UNESCO convention. Among the first official documents which presents the term yizhan there is the Rules on the Implementation of the Law of the People's Republic of China on the Protection of Cultural Relics of 1992 where the site of Yinxu is named as cultural heritage site and no more as cultural relics (Lai 2016; Li 2020). After the revision of the 1982 Cultural Relics Protection Law and it's 2002 amendment, the terms "cultural relics" remained used primarily in the legislative and administrative context. Significant is the renaming of the Bureau of Cultural Relics, which in 2003 became State Administration of Cultural Heritage. The use of the term cultural heritage has been specially incremented after 2000 when China Principles became the national adopted guideline for the conservation practice: as reported by Li (2020) in 2005 was promulgated the very first official cultural heritage themed notice by the State Council. (Li 2020; Notice of the State Council on Strengthening the Protection of Cultural Heritage 2005)

This remarkable linguistic shift is an important signal of the active dialogue which involved China with important foreign agencies, during the late Eighties and the Nineties, but it is necessary to wait the 2000's to see China as a pro-active member of the

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¹⁸ Among the many scholars who study this ideological shift on the use of cultural heritage in China see: Robert Shepherd 2009; Celin Lai 2016; Kuanghan Li 2020; Denton 2005.

¹⁹ or *yichan* as reported by Li 2020.

CHAPTER 1 REPRODUCING THE DISCOURSE ON CULTURAL HERITAGE IN CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATIONS AND MODERN VALUES

international debate. A significant moment can be traced in 1999 when China was elected as member of the Heritage Committee; another important event, which shows the significant steps forward made by the country in these years, is the ratification of the Convention for the Safeguarding of the Intangible Heritage in 2004. This meant that China entered into another chapter of the conservation practice: the initial "nationalisticoriented" period of the conservation practice, limited to the built heritage and material forms, was concluded and China was ready to start a more mature discussion on values and heritage typologies. Officialized toward the endorsement of UNESCO, the "nationalistic-oriented" conservation moment played a significant role in creating a public shared image²⁰ of China as a unified territory and community developed across thousands of years (Shepherd 2009; Lee 2020; Silverman and Blumenfield 2013), period which ended up with the ratification of 2004 UNESCO²¹. The acknowledgment of the intangible heritage as a new category of the national cultural legacy is an important ideological progress made by China, considering its relatively young experience in protection practice, thanks to the pro-active participation on international debate. The dynamic participation of China in the international discussion on intangible heritage brought the discourse to an internal level which consequence was the promulgation of the Law on Intangible Cultural Heritage in 2011²². As a result of these intertwining national and international efforts, in 2018 China is reported as the nation having the largest number of intangible heritage sites named among the World Heritage List (Su, Cheng 2020). Even if the law claims to protect its intangible heritage for cultural purposes, this typology of the national cultural legacy represents an "important resources for cultural industries and

²⁰ This is confirmed by words written by Agnew and Demas on the preface of the 2004 bilingual edition of Principles for the Conservation of Heritage Sites in China: "China is a unified country of many ethnic groups; it is a vast country with a long history and an unbroken cultural tradition. The large number of surviving heritage sites affords a vivid record of the formation and development of Chinese civilization. They provide the evidence for an understanding of China's history and a basis upon which to strengthen national unity and promote sustainable development of the national culture" (ICOMOS China 2004).

²¹ After China ratified the intangible Heritage Convention in 2004, formally adopted for the first time the notion of Intangible heritage within the 2005 Notification of the State Council on Strengthening the Protection of Cultural Heritage and in the same year the Chinese government issues Opinions of the General Office of the State Council on Strengthening the Protection of Intangible Cultural Heritage of China (Su, Cheng 2020).

²² The Law of the People's Republic of China on Intangible Cultural Heritage adopted at the 19th Session of the Standing Committee of the 11th National People's Congress of the People's Republic of China on February 25, 2011, is hereby published and shall come into force on June 1, 2011.

tourism" as is reported by the law itself. So again, what happened on sphere of the tangible heritage is reproduced within the intangible field of the heritage: the difficult balance between the protection mission and the economic goals brought by tourism (Su, Cheng 2020). And again, as worked for the built heritage, also the national enthusiasm for intangible heritage is ideologically and intrinsically understood as a driving force of the Chinese nation-building process (Lee 2020).

During the decade 2000- 2010 in China speared out what Celine Lai (2016) called an "heritage fever": if from one hand, joining UNESCO increased the consciousness about the high value of the national cultural heritage, on the other hand the cultural legacy protection practice spread out as a competition between local governments. Local officials, in fact, saw in the World Heritage label, not only a universal cultural "brand" which could ensure revenue increase due to tourism fluxes, but, to have local sites selected among the world heritage list, was also seen as the coronation of their careers.

Despite the criticism of many scholars who accused China to use its cultural heritage as a soft power, China's increasing influence among UNESCO and international conservation heritage discourse is undoubtful, both in terms of World heritage List and agreements signed, together with funding programs and restoration work of foreigner sites²³, a way to showcase professional ability in conservation practice and to confirm nation's commitment in playing a leading role among heritage international community.

Nowadays China is the nation with the biggest number of sites listed as World Heritage, 55 in total: divided in 37 cultural heritage sites, 14 natural heritage sites and 4 mixed cultural and natural heritage sites. Moreover, considering the inventory of the properties which China promoted for the nomination over the years- 60 sites on the tentative lists-, it can't be denied that heritage plays an important role in Chinese political agenda. This is confirmed also by the conspicuous number of official events, 34 starting from the early 2000's and by the important documents signed after the ratification of the

a UNESCO project in Africa (Lai 2016). About foreign aid projects, China carried out the restoration work of the entrance area of the Palace of the Bogd Khan in Ulaanbaatar, Mongolia, and the conservation of Chau Say Tevoda and Ta Keo temple of Angkor in Cambodia (Tong 2016).

²³ After Xi Jinping, president of the People's Republic of China, delivered a speech at UNESCO's headquarters during his trip to France in 2014 - announcing that China was a country with a civilization made up of "one hundred flowers in full blossom" such that it "brings spring to the garden", in the same month, China sent USD8 million to support a UNESCO project in Africa (Lai 2016). About foreign aid projects, China carried out the restoration work of the

1972 World Heritage Convention in 1985: later on China has signed the 1970 Convention²⁴ on the illegal import and export of movable cultural objects, the Convention on Intangible heritage²⁵, the 1954 Hague Convention on protection of the cultural heritage in armed conflicts²⁶ and the Convention on the diversity and cultural expression.²⁷

The international dialogue and commitment are mirrored in the national dimension by very significant decisions taken by the central government: in December 2005, the State Council issued the *Notice on Strengthening the Protection of Cultural Heritage*²⁸, defining guidelines, major objectives and measures on the national cultural legacy protection. Moreover, the Notice established a National Cultural Heritage Protection Leading Group composed of fifteen ministries and a special commission and promoted the "Cultural Heritage Day" to be celebrated every year on the second Saturday of June, starting form 2006 (Notice of the State Council on Strengthening the Protection of Cultural Heritage, 2005). While, enlarging again the perspective to the international discourse, China, starting from 2005, hosted a series of prestigious conferences such as the 28th Session of the World Heritage Committee; the 15th General Assembly and Scientific Symposium of ICOMOS; the 2nd International Conference on Heritage Conservation and Sustainable Development; the International Symposium on the Concepts and Practices of Conservation and Restoration of Historic Buildings in East Asia; the International Symposium on the Conservation of Painted Wood Architectural Surfaces in East Asia; and sessions of the ICOMOS Advisory Committee and Scientific Committee meetings. On the side of the international documents, China signed following

²⁴ The 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property was signed in November 1989.
https://en.unesco.org/fighttrafficking/1970

²⁵ The 2003 Convention for the Safeguarding of the Intangible Cultural Heritage was signed in 2004. https://ich.unesco.org/en/convention

²⁶ The 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict was signed in 2005.

http://www.unesco.org/new/en/culture/themes/armed-conflict-and-heritage/convention-and-protocols/1954-hague-convention/

²⁷ The 2005 Convention for the Protection and Promotion of the Diversity of Cultural Expressions was signed in 2007. https://en.unesco.org/creativity/convention/texts

²⁸ Notice of the State Council on Strengthening the Protection of Cultural Heritage, 2005, n.42 http://www.gov.cn/gongbao/content/2006/content 185117.htm

important texts, enhancing its commitment on conservation practice and arising its voice and its influence: Suzhou Declaration on Enhancing Youth Education on World Heritage Protection; the Xi'an Declaration on the Conservation of the Setting of Heritage structures, Sites and Areas; the Shaoxing Declaration on Heritage Conservation and Sustainable Development; the Beijing Document on the Protection and Restoration of Built Heritage in East Asia; the Beijing Memorandum on the Conservation of Caihua (decorative painting on wood) in East Asia (Tong 2016).

As pointed out by Tong Mingkang²⁹ on the foreword of the 2015 edition of China Principles "The current trend of much closer integration of conservation of cultural heritage with social progress is gaining momentum. Cultural heritage is now viewed as a positive force for sustainable socio-economic development and can improve the lives of people and make the world a more diversified, harmonious and beautiful place. Cultural heritage will continue to have considerable impact on the development of society. This in turn will result in society asking even more from those who conserve it. One of the most important issues that needs to be resolved at the moment is how to gradually progress from simply conserving cultural heritage to interpreting and presenting it, using it and conserving it simultaneously. Overall consideration needs to be given to the social benefits that heritage conservation brings and greater emphasis placed on the role of conservation in promoting the development of society" (ICOMOS China, 2015).

²⁹ Tong Mingkang at the time (2015) was the President of ICOMOS and Deputy Director of the State Administration of Cultural Heritage.

1.4 China Principles Project. Actors and Institutions

1.4.1 China Principles Project, an overview

In the context of the Eighties' rapid socio-economic changes, although China had adopted a well-developed national legislation to protect its cultural legacy, what was still strongly missing was a set of clear professional rules to transfer the guide lines of the national heritage protection and management from a juridical level to a more practical one.

As stated by Agnew Neville³⁰ (et al. 2004) and confirmed by his colleague doctor Martha Demas³¹ during the interview³², there was a general lack in tools and skills: professional figures dealing with cultural sites management were not trained to face a so complicated national conservation scenario. Moreover, there was a poor scientific conceptualization about conservation issues, a left by chance methodological approach, a tendency to over restore damaged sites and a general lack of supervision

According to Neville and Demas (2004), the two main actors of the China Principles project affiliated to Getty Conservation Institute, at the end of Nineties, five key elements would have helped China to achieve results on the preservation of its cultural legacy: an enforcement of the national legislation in terms of effectiveness; an educational system to prepare and train professional figures in science, conservation and management; a set of professional and not legislative rules to guide the national heritage protection and managerial practice; to effectively improve the managerial system to ensure high conservation standards to all the three administrative level of the administrative division; an integrated national policy that over-rides the artificial separation of authority and responsibility that different ministries exercise over essentially inseparable categories of heritage. China Principles project was born within these premises.

The Principles for the Conservation of Heritage Sites in China, is an official

³⁰ Agnew Neville is Principal Project Specialist of the China Principle Project and China project leader of Getty Conservation Institute.

³¹ Martha Demas is Getty Conservation Institute Senior Project Specialist and China Principles project manager.

³² See APPENDIX I of this study.

document containing professional, non-regulatory guidelines, drafted after three years of international cooperative work between Getty Conservation Institute, State Administration of Cultural Heritage, China ICOMOS and Australian Heritage Commission. The international team worked together from 1997 until 2000 and was composed by different professional figures belonging to different disciplines and cultural backgrounds. The team representing Getty Conservation Institute had a driving force role. It was led by Agnew Neville and Martha Demas, respectively Principal and Senior Project Specialists. The other members of their group were: Lorinda Wong as Project Specialist, Shin Maekawa as Senior Project Specialist, Ayda Haghighatgoo as Senior Project Coordinator, Po-Ming Lin, as consultant team member, facilitation and translation, Peter Barker as consultant team member, formal translator (The Getty Conservation Institute 2019).

From the Chinese side, a core group of ten professional figures including senior professionals from architecture, archaeology, conservation, and site management, together with a larger group of more 30 experts which were providing comments, was led by the Deputy Director-general of the State Administration of Cultural Heritage, Zhang Bai also Chairman of China ICOMOS (D'Ayla, Wang 2006). Among the professional member of the Chinese team there were: Sheng Weiwei, Deputy Director of Foreign Affairs Office of the SACH; Huang Jinglue, Head of the Archaeology Group of SACH; Huang Kezhong, Deputy Director of National Research Institute of Cultural Heritage of Beijing; Wang Shiren, Member of the National Committee for the Protection of Historic Cities, Beijing; Fan Jinshi Director of Dunhuang Research Academy, Gansu Province; Wang Liping, Deputy Director of the Bureau of Cultural Heritage and Gardens of the City of Chengde, Hebei Province; Zheng Guozhen, Director of the Cultural Heritage Division of Provincial Department of Culture, Fujian Province. The Australian partnership was led by Sharon Sullivan, Executive Director of the Australian Heritage Commission together with Kirsty Altenburg, Senior Conservation Officer (Agnew et al. 2004; GCI 2000; Sullivan 2001).

If the China Principles development formally lasted from 1997 to 2000, the root of the project may be recognized even earlier within the beginning of the enduring collaboration between and China and Getty Conservation Institute.

The Getty Conservation Institute, is a cultural and philanthropic institution belonging to the Getty Center in Los Angeles, which focuses on visual arts. Among Getty Institute's major missions there are all the heritage conservation's related issues which brought Getty to undertake different field works around the world. Among its most successfully and enduring projects there is the collaboration with the Dunhuang Academy³³ which dates back to 1989 (Agnew et al. 2012). After China ratified UNESCO Convention in 1986, the attention on Chinese cultural heritage preservation need became an international issue. The Getty Conservation Institute was approached to collaborate with China, by the UNESCO representative in Beijing. Some exploratory mission followed the first institutional one, done by the first Getty Institute's director Luis Monreal and in 1989 Getty and China's State Administration of Cultural Heritage signed a memorandum (Agnew et al. 2016).

Since that date Getty Conservation Institute and China started to cooperate in scientific research, conservation training and formal educational initiatives, site stabilization, master planning for the site, staff exchanges, and-since the late Nineties- to the development and implementation of systematic methodologies for conservation of wall paintings and addressing the impact of visitors on the site (Agnew et al. 2012).

At that time working on Getty Conservation Institute team there were both Agnew and Demas and, being this Mogao projects successful, the premises of a bilateral scientific trust were set, as the two scholars confirmed during the interview³⁴. The coming into the scene of Australian Heritage Commission happened later, after Getty Institute proponed to the Chinese parties to have them among the project because their important experience carried out with the developing of the Burra Charter.

³³ In the early years of the 1940s the precursor of the Dunhuang Academy was formed to superintend Mogao Grottoes, charged by the responsibility to protect and study the site and its arts. Nowadays the Academy is one of the top-level institutions in China in cultural heritage conservation and management practice, counting among its staff some several hundred professionals working in different departments (management, conservation, visitation, exhibitions, academic study). (Agnew et al. 2012)

³⁴ See the complete interview to the scholars in APPENDIX I

1.4.2 GCI. Interview to Neville Agnew and Martha Demas

In order to better understand the crucial importance of *China Principles* project the author interviewed the main international professional figures who contributed to develop the debate on cultural heritage practice in China. The following data, which enrich the bibliography available on the project development, have been collected by the author during personal interviews³⁵ to Neville Agnew and Martha Demas representatives of Getty Conservation Institute and to Sharon Sullivan, who at the time was at the head of the Australian Heritage Commission. This information is important to reconstruct the "behind the scene" of the project in order to record the development of the drafting process. What emerged is a vivid discussion between professional figures working in cultural heritage which animated the debate on practical and theoretical issues, personal memories and feelings which contribute to read the *China Principles* project as a living and evolving charter. The complete interviews to Agnew Neville and Martha Demas are reported in APPENDIX I.

When Agnew Neville and Martha Demas began to collaborate to *China Principles* project they have been working with China since beginning of 1989. After five years of work in Mogao Grottoes in Dunhuang and at Yungang Grottoes in Datong they had to stop the collaboration because it was too demanding from the point of view of many logistic issues: travel, time and, lack of heritage professionals in the staff which would have made impossible to sustain a remote partnership. The temporary stop of the collaboration was followed by the conference "Conservation of Ancient Sites on the Silk Road" which was held in 1993 at Mogao and brought together specialists from the West and East to discuss common problems on conservation; the conference revealed to be itself a moment of evaluation of the partnership between China (State Administration of Cultural Heritage) and Getty Conservation Institute and it ended up to the decision to resume the collaboration on at the Mogao Grottoes site which could have offered a more

³⁵ See the complete interview to Neville Agnew and Martha Demas in APPENDIX I and to Sharon Sullivan in APPENDIX II

³⁶ The conference "Conservation of Ancient Sites on the Silk Road" held in 1993 at Mogao, brought together specialists from the West and East to discuss common problems on conservation (Site Conservation at the Mogao and Yungang Grottoes, 1990-1995 https://www.getty.edu/conservation/our_projects/field_projects/sitecon/index.html).
See also Agnew and Kezhong 1993.

sustainable partnership under the supervision of the Dunhuang Academy.

China Principle project started around 1996-1997. The Chinese institutional representatives were aware about the need of a document to guide the national conservation practice. From what reported by Dr. Neville, at the end of nineties, Wang Shiren, an architect no longer practicing, had already started to develop ideas on such a document based on traditional Chinese practice on conservation. The very beginning of the idea has to be attributed to him and not to China ICOMOS. China ICOMOS at that time, was at its very early stage and it was an institution still very connected to State Administration of Cultural Heritage: China ICOMOS and SACH were basically the same thing. In trying to evolve as an independence cultural heritage agency from SACH, China ICOMOS was involved in the project of drafting a document to guide the national conservation practice and it became the national actor of what later revealed to be an international dialogue which gave birth to the China Principles for conservation of Cultural heritage. Both the scholars form Getty reported that "it was a very early stage to work in China on such topics, but we already had credential to work in China, having worked at the Mogao Grottoes site before to start China Principles project; so that was the key, that was the secret and that was why they brought us in to the drafting process of the Chinese charter, because we had a mutual trusted relation in working together".

Despite the long cooperation, at the beginning of what became a long-lasting collaboration between Chinese cultural heritage organizations and Getty Conservation Institute, the work was not so easy. Between the end of eighties and the beginning of nineties, working with Chinese government and in China in the field of heritage studies was very challenging. The first thing that emerged as necessary was the need of training on management practices. For this reason, the Australian Heritage Commission was involved to the collaboration, having Mrs. Sharon Sullivan as Executive Director. She started to set up training course on management of cultural heritage sites and during this training period, from the needs and the debates which emerged, the Burra Charter has been chosen as methodological model for the *China Principles*. Martha Demas stated that "it was considered the best model to adopt because, among the other charters, it added the social and cultural values. When Australia set down Burra Charter as an instrument of the ICOMOS Australia, it became a reference widely adopted both domestically and

internationally. Burra Charter takes in consideration what Venice Charter doesn't; since Venice Charter is much more oriented towards architectural heritage, it was considered not suitable to deal with Chinese heritage because, as in Australia, a great part of the heritage is intangible heritage so, what Dr. Neville, Dr. Demas thought was needed was Burra Charter as model".

Given the strong relation between Getty Conservation Institute and Australia Heritage Commission, Dr. Neville and Dr. Demas invited Mrs. Sharon Sullivan not only as management expert to train professional, but they also wanted her to join the drafting process of *China Principles*, considering her strong experience in having previously developed the Burra Charter. What the three international actors said it is worthy to be mentioned:" It was a kind of natural fit. Sharon Sullivan was for a long time a colleague of us. That was the connection that brought us together. We invited the Australia Heritage Commission to be our partner and the State Administration of Cultural heritage agreed on this".

At that time, the Deputy Director of SACH was Mr. Zhang Bai, who joined the debate and the drafting process of the China principles along with a team of experts from China including people working on Mogao Grottoes and in Qin Dynasty Summer Palace. The first draft of what later on became the first Chinese set of professional guidelines on cultural heritage, was elaborated by Agnew Neville and Martha Demas as representatives of Getty Institute and by Mrs. Sharon Sullivan as Executive Director of Australian Heritage Commission, representing the western professional figures taking part to the process, and by the Chinese team headed by Mr. Zhang Bai, playing the role of the national professionals.

To enter in the detail of the drafting process, between 1997 and 2000 a series of workshops were organized among Australia, China and United States. Martha Demas told that the workshops "were organized in order for the three partners to really work together, to understand what conservation and management meant to each other's, to see practical examples on the field work. We needed to understand issues related to conservation and management of sites in China and they needed to have a better understanding of the international practice. So that was the idea behind the workshop." It was a chance to visit sites in the three countries, to talk with professionals and to have a

practical mutual understanding of the transnational heritage conservation practices. Agnew Neville added that, when they organized the workshop in Australia "it was a chance to understand how they work there, to meet people related to Burra Charter, to comprehend how they manage the sites. We did another workshop in United States and it was an occasion to enhance the reciprocal understanding in approaches and languages. In United States we visited sites related to the idea of opening up the concept of what is usually considered- with particular reference to China- Cultural Heritage. We went to memorial sites, to industrial heritage sites and to scientific sites".

What it is important to remark is that the drafting process of *China Principles* became an occasion to have an international exchange on cultural heritage issues form a closer point of view, a dialogue which enriched not only Chinese knowledge, which also helped American and Australian understanding of what was considered cultural heritage in China. The scholars interviewed said that it was a very rich discussion which had its biggest debate rooted on values. Neville Agnew and Martha Demas recounted: "we had big discussion about many issues. The issue of the values was among the biggest differences in understanding that emerged during the project: which values to articulate on the document. Within Chinese Law texts, just three values are mentioned as attributed to heritage: artistic, scientific and historical. The big discussion arose around the new typologies of heritage values brought by the Burra Charter, used as model to draft China Principles, especially the social value. That was something that Chinese professionals working with us were not feeling comfortable on. So, they didn't want to add this value to the document of China Principles. That was a stumbling block and the way they solved it was to use the phrase of "benefit to society". That phrase changed in the 2015 revised version of China Principles in order to increase and enlarge the idea the idea of values.".

Along with the values, another thing that has been debated was the name of the document. The first proposal advanced by the three international actors was "China Charter" after the Burra Charter, but the Chinese professionals did not agree considering that the translation of "Charter" into Chinese is understood as "Law". Since the *Principles* were not intended to have a legal value - China already had a law on heritage- the document could not have been called as a law in order to don't create problems; "that is why we proposed "Principles" and that was accepted", said the two representatives for

the Getty Institute.

Talking about language, Agnew Neville said that "there were a lot of discussions over terminology and that's why we came out with the Glossary; we think it is a very useful tool, a part of the document itself. The translation has been a very difficult thing to carry out, since there were a lot of chances to misunderstand when working with such different languages as Chinese and English. We didn't have any professional translator but we did it by independent scholars. There were open discussions and everybody had comments about translations, it was incredibly difficult".

The publication of *China Principles* in 2000 was followed by a series of talks, conferences and practical training all over China and by a Chinese and English bilingual version in 2002. After ten years the adoption of *China Principles*, Chinese cultural heritage professionals started to revise the charter; on that point, Agnew Neville said: "China had ten years to think about how to use that set of rules, how to implement it and after a decade they were ready to enlarge the thinking about it". The revision of China Principles, was much more a Chinese process, since it was initiated by China following the need to enlarge the first version, this is why *China Principles* has been defined by many scholars as a living document.

For the second edition, Getty Conservation Institute had been involved in a much lower level and Australian Heritage Commission was no longer invited to join the discussion. The revision process was headed by ICOMOS China and that was significant since it meant that the cultural heritage discourse in China was mature enough to take the lead of a new chapter. On this point the Agnew Neville and Martha Demas stated that: "it was China to have the idea to revise the first edition and we have been invited later to the process. We were encouraging and supporting to independently revise it. We knew the first version was pretty conservative, it was just the first step. China needed time to enlarge it and after ten years they were willing to do it".

It is the case to say that the international debate and the international exchange of experiences in working with organizations such as UNESCO and ICOMOS and in dealing with transnational models, China was definitely ready to define its own path in developing a new Cultural Heritage charter and defining its own rules and values according to the changed needs of the society.

1.4.3 Australian Heritage Commission. Interview to Sharon Sullivan

To the extent to reconstruct the evolution of the international debate on Chinese cultural heritage practice and in order to have a comprehensive understanding of the interaction and exchange of the international actors which took part to the drafting process of *China Principles*, the author interviewed Dr. Sharon Sullivan the Executive Director of Australian Heritage Commission at the time of the project. Her memories about the collaboration between Chinese institutions, Getty Conservation Institute and Australian Heritage Commission represent a very important witness on the development of Chinese cultural heritage discourse thanks to the international dialogue and the transnationality of the models.

The complete interview Dr. Sharon Sullivan is reported in APPENDIX II.

During the eighties Sharon Sullivan was working with Getty Conservation Institute; while she was organizing courses on cultural heritage site's management she met Agnew Neville who, at that time, had already started to work in China- specifically in cave grottoes and he was already been asked by Chinese heritage organizations to develop management trainings among Chinese heritage professionals. One of the most urgent concerns felt by the Chinese heritage professionals- remembered Sharon Sullivan- was about the site's management: "the sites were very well looked after by guardians but that was the time in which China was opening up a little more and the people who were looking after the sites really did not have any experiences in managing touristic sites".

Her training in Getty Institute were based on Burra Charter, adopted as theoretical and methodological model: "in late 1980's when I did the course in Los Angeles we used to go to the heritage' sites, we looked at the sites and we wrote management plans. Our work was mostly based on values. We had four different groups and every one was asked to write a plan; then we used to debate and to find the best management solutions based on site's values. I organized three courses in Los Angeles structured in this way, based on Burra Charter methodology". Given the success of the courses, Agnew Neville- who at that time had been working with China since few years- asked to Sharon Sullivan to set up a course on the management of rock art sites in Los Angeles for a Chinese heritage professionals delegation. Sullivan reported that: "this course was structured as a single management course specifically provided by Getty Institute for the Chinese delegation;

it was focused on rock art which has some associations and similarities with the cave temples. So that, two Chinese professionals came to attend the course. They went home and they reported about the course to their bosses. They gave to Neville a very good feedback, and they told him they would have liked to have a course specifically organized on Chinese sites. So, Neville and I arranged to run a course in Yungang. There were few young promising archeologists attending the course, willing to enter in the conservation and management system". That course offered to the Chinese young professionals a better understanding of the management issues; the course also provided a Chinese language book composed by the series of lectures given to the management course which had been printed in 10.000 copies, having a large success. As the management course in Los Angeles, also the one organized in China was based on Burra Charter methodology, and "Chinese experts really liked it to the point to tell to Neville that they would had like to adopted it as model. I remember very well"- Sharon Sullivan said - "that Neville replied to them that they should adapt the Burra Charter to the Chinese heritage specific needs, and they should have written their own charter based on their tradition. Australians wrote the Burra Charter to answer to the specificities of Australian heritage context, so this is what the Chinese should have done for their heritage. At that time, I was at the head of Australian Heritage Commission and we worked with the Getty Conservation Institute for quite a few years to do that". This is how, at the beginning of the nineties, Australian Heritage Commission, Getty Conservation Institute and ICOMOS China get in contact and how the international debate started with the idea- promoted by the Chinese partiesto adopt Burra Charter as methodological model.

Sharon Sullivan was among the scholars and professional figures who contributed and participated to the writing process of Burra Charter, so that her contribute to the debate emerged during the *China Principles*' drafting process was crucial. Regarding her involvement in writing the Burra Charter she remembers: "When Australia ICOMOS was founded we looked at Venice Charter to see how it would fit to Australian practice. We discovered a lot of differences in practices. Venice Charter was more for all that sites which have no longer a community related to it, which have a no longer traditional use. In Australia we have a very different typology of heritage, we have much more recent heritage and in, general, in Australia people have a different way to think about heritage.

So basically, we took the Venice Charter and we thought it was more appropriate to look for all the values and not just for the ones a group of scholars thinks a site is thought to be important, we thought it would have been important to involve all the stakeholders related to the site in order to fully understand its value. So, we came up with Burra Charter, a very simple charter based on the principle that you must look for all the values which the site has and not just for the ones you think it has or the ones that an architect or a scholar thinks it has. Burra Charter was so important in Australia because it was responding and fitting to the local context, aims which Venice Charter could not satisfy since it was written to protect the antiquities of the past, like Greek and Roman remains, and it makes look monuments like frozen by the time. Venice Charter was based only on the three "traditional" values: historic, aesthetic and scientific ones, values which were not fully fitting to Australian conservation needs".

Since Burra Charter is a value- based charter, values became the basis of the debate in developing the Chinese charter: this was the theme which more attracted the Chinese party at the beginning of the discourse, Chinese professionals were very interested on the value-based discussion: "you have to discover all the values which the site represents to the society and then you manage it according to attributed values. This means that if you have a temple which used to be repainted over the years since Ming Dynasty, for instance, then you would repaint it, because the values that Chinese civilization places on the temple is related to the fact that the temple has to be wiped and shiny, as sign of respect. Of course, this is something which attracted a lot of discussions in Europe. Because European thinking is based more on Venice Charter, so they didn't want the temple repainted. I remember this happen when we went to visit the birth place of Confucius and we met the site's manager. He was a very intelligent man and he said to us that everybody was telling him he could not repaint the temples' walls. So, he didn't touch for sometimes the heavy paint of the wooden walls (which it had also a protective function) and many visitors, "accusing" him to not look after the temple properly and was giving him money to repair the temple as it used to be in order to pay respect to Confucius". What Sharon Sullivan remarked was that during the debate, what Chinese realized was that they could have use methodology of Burra Charter and blending it with European theories on conservation: "they could have both conserve the temple while honoring traditions".

These special memories, recounted by the scholar, represent the very beginning of the discussion; it's a witness on how Chinese professionals took part to the debate and how Burra Charter was used as theoretical and methodological model. Dr. Sullivan also added: "The issue which makes Burra Charter politically relevant is its principle according that values must be identified before to decide on the site's management. It means that you have to take into consideration all the values to see if there would be some of them which could be impacted by tourism, for instance. The identification of the values is something that allows decision makers to take coherent decisions on the destination of the site. All governments should agree on this point of the Burra Charter".

The Chinese scholars who attended the course quite immediately understood the Burra Charter methodology, showing an interest about the values that it added if compared to Venice Charter; the majority of these scholars were young promises which instantaneously understood the importance of the values-based system. Despite also senior bureaucrats understood the contents, they did not agree on adding social and cultural values. On this point Sharon Sullivan said: "That's why we had 5-4 years of discussions, because senior heritage professionals, in charge to write the charter were not convinced about Burra's methodology, they haven't been to the management's course. What we did in the following workshops was to organize a huge number of debates during about differences on methodologies between Australia, China, and America. And that was amazing for all of us. We all learnt something new". That is why and how a series of workshops had been organized around the three countries, a special occasion where all decision makers could really focus on the writing process of the charter by experiencing and debating international heritage practices.

According to the scholars interviewed and, in particular according to Sharon Sullivan, the majority of debates which arose among the professionals taking part to the drafting process, were based on the issue of values, especially on the social value: "Social values is where a lot of debates evolved around and our Chinese colleagues tried very hard to understand it perfectly. When they came to Australia and to America, they saw the strength of that value. But, even if they fully understood it, they were worried about its meanings in China at that time. Social value meant "value to the community". And I clearly remember that they were very worried to mention it among the charter because of

the interpretation the local municipal authorities would have attributed to it. The State Administration of Cultural Heritage, working at national level, at that time was not very powerful and it aimed to have more visitors for cultural heritage sites. Moreover, we are talking about people who lived the Cultural Revolution in their youth and who related social values something linked to the community. My reading is that senior heritage professionals understood the importance of social value, but they were worried to explicitly put it into the charter because of the different ways in which it could have been interpreted by local authorities".

What Sharon Sullivan remarked during the interview is the importance of the bilateral dialogue and the open debate on relevant heritage issues which emerged during the three-years project. As underlined by Agnew Neville and Martha Demas, among the most important achievements of the China Principles project, there is the profound debate and exchange which enriched all the parties involved in the work. On this theme Dr. Sullivan pointed out: "I wouldn't say we got misunderstandings, we rather had very extensive debates. And, even if sometimes they were very powerful debates, they were very well accepted on both sides. We were all heritage professionals and that was very clear. And the debates were very animated sometimes. But we both learned. And during debates Neville and Zhang Bai were fabulous leaders, they were both people who were very interested in intellectual debate and were really able to tackle their own ideas".

The success of the long-term project had been based on a mutual understanding and a mutual trust; beside the result of the charter itself, what the *China Principles* project created was a legacy built up on a trustable relation in between the parties. The project has been realized through the funds form the Getty Conservation Institute which ensured the three- years of the collaboration: "What Getty did in China is the best project they have done in the last twenty-five, thirty years because they left such a legacy. They really made a cultural change, in my vision. Getty really had understood what Marta and Neville were doing with their leadership, they were changing the world of the heritage conservation". According to Dr. Sullivan personal experience, beside the mutual trust and exchange, a second element allowed the success of the collaboration: the involvement and the direct collaboration with the Chinese senior heritage professional figures and experts. The result was a very simple and practical charter which, despite Chinese

bureaucratization, was kept as a simple and clear tool, a guideline for the practical procedures. And the practical side of the project was tested as soon as *China Principles* were published: Mogao Grottoes masterplan became an outstanding example for Chinese heritage practice which has been kept as a reference. Dr. Sullivan remarked that what really reinforced the principles and its understanding was the adoption of the rules on a real site. Along with the practice on daily life site's management, the heritage professionals, who were involved in China Principles process, begun to write conservation plans according to the charter's rule, setting a new trend in Chinese cultural heritage protection and management practices; on this point Sullivan stated: "the most important switches brought by China Principles' adoption was on site's management. I also think that China Principles based on Burra charter had a profound international impact, which let value-based management be an excepted new methodology which bring the community together.".

1.5 China Principles. Drafting process, debate and values

1.5.1 China Principles 2000

The Principles for the conservation of Heritage in China, as enounced respectively in art. 1 and art. 2, "serve as guidelines in conservation practice for everything commonly referred to as heritage sites", having as purpose the "good practice in the conservation of heritage sites" where for conservation in intended "to preserve the authenticity of all the elements of the entire heritage site and to retain for the future its historic information and all its values" (ICOMOS China, 2004).

Written in accordance with the existing Chinese legislative regime concerning cultural heritage, China Principles, as declared in the preface of the document, was driven by the beliefs declares by the 1964 International Charter for the Conservation and Restoration of Monuments and Sites (the Venice Charter), being the first and most representative document on heritage conservation practice (D'Ayla, Wang 2006; Agnew et al. 2012).

The Principles for the conservation of Heritage in China were firstly issued only in Chinese language in 2000 by ICOMOS China with the approval of State Administration of Cultural Heritage and, in 2002 translated and published in English by Getty Conservation Institute. In 2004 a third edition was delivered³⁷, after a joint decision by Getty Conservation Institute and State Administration of Cultural Heritage which proposed to add, to the new bilingual version of the China Principles, an English-Chinese glossary (D'Ayla, Wang 2006; Agnew et al. 2016).

Born after the perceived lack of managerial capability and professional training which characterized the Chinese field of cultural heritage during the nineties, *China Principles* became the practical handbook for the national heritage management, officially adopted since the beginning of 2000's.

As confirmed by the scholars during the interviews, the process of drafting the document was carried out through a series of international meetings, discussions and workshops involving three states (China, United States and Australia), represented respectively by four institutions: China ICOMOS, State Administration of Cultural Heritage (SACH), Getty Conservation Institute (GCI) and Australian Heritage Commission (AHC). Seminal moments of the drafting process were embodied by the workshops hosted by the three countries. To really comprehend the dialogical collaboration occurred between the international institutions and to understand the paratactical side of the discourse, is worthy to analyze the triangular workshops system which have been organized between 1997 and 2000.

The first of the workshop-series was held in Australia in 1998, it lasted two weeks, from February 1st to February 16th, and it was preceded by rich discussions both in Australia and in China in October 1997. The aim of the workshop was to further clarify the principles of heritage conservation promulgated by ICOMOS Australia and declared in the Burra Charter together with a close focus on practical use of these principles by Australian professionals (GCI 1988; Sullivan 2001). As reported by an article published in the GCI Newsletter, the workshop was dedicated to senior Chinese heritage officials covering key positions in the field: twelve in total, representing the national

³⁷ This chapter is based on the third edition of China Principles, edited in 2004.

Administration of Cultural Heritage (the previous name of the SACH), the China National Institute for Cultural Property and the directors of provincial cultural heritage bureaus together with directors of Mogao grottoes and Chengde Imperial Summer Resort's cultural sites (GCI 1998). The Chinese team was led by Zhang Bai, Deputy Director of National Administration of Cultural heritage, who reported the importance for "conservation specialists to exchange ideas and experiences in considering their own country's situation" (GCI 1998).

During the workshop, the Chinese team had the possibility to visit historic and prehistoric sites around Sydney and Canberra, sites which had been chosen on the basis of the diversity of values and conservation and management approaches. A practical side of the workshop was dedicated to discuss how the conservation principles and planning process promoted in the Burra Charter have been applied to these heritage sites. Form the point of view of the writing process, this Australian field-work gave the possibility to revise the first draft of the *Principles*, made out by the Chinese team, according to what experienced and discussed during the workshop (Sullivan 2001; GCI 1998).

A second workshop was held China, in late 1998 summer, during which the China Principles draft was finalized and revised.

Within this international program of workshops, between April 24th and May 10th 2000, a third field-study meeting was hosted in United States. The delegation from China and Australia, received by Getty Conservation Institute, started the tour with a one-week visit to the Washington, D.C. area. Among a number of site visits, the international project team met with the U.S. Advisory Council on Historic Preservation, the National Park Service, and ICOMOS United States. The workshop continued with a one-week visit in New Mexico where the delegation visited national monuments, along with public and private cultural heritage sites. As reported on the Getty's Newsletter "the project professionals also met with tribal leaders at Acoma Pueblo, one of the oldest autochthon community of the United States and with leaders of Cornerstones Community Partnership, which works with communities to restore their traditional buildings" (GCI 2000).

After the New Mexico tour, the delegation moved to Los Angeles where they spent three days visiting El Pueblo de Los Angeles Historic Monument and, Getty Institute Museum and scientific conservation laboratory, having the occasion to meet with GCI

director, Tim Whalen. The American visit comprised discussions with site managers, interpreters, park rangers, park superintendents, state preservation officers, archaeologists, private practitioners and others professionals engaged with the care and management of the sites (GCI 2000).

In between the Australian and American field-study tours, a series of meetings in China was held over the three years, giving the possibility to test in the practice the effectiveness of China Principles proposal. The China Principles project delegation had the chance to visit different cultural heritage sites in Hebei, Liaoning, Yunnan, Fujian and Gansu provinces creating many chances for debating with site managers and practitioners. The discussions, encouraged by the field experiences, allowed to recurrent changes of the developing Principles (Agnew et al. 2014).

China Principles represents a successful example of international and interdisciplinary cooperation on cultural heritage protection and management practice which brought to publish a complete document of 38 articles, covering all the heritage conservation issues. The articles are divided into five chapters: chapter one: General Principles (art. 1-8); chapter two: the conservation process (art. 9-17); chapter three: Conservation Principles (art. 18-27); chapter four: Conservation Interventions (art. 28-35); chapter Five: Additional Principles (art. 36-38).

The 2004 Chinese-English bilingual publication is introduced by a foreword-written by Neville Agnew and Martha Demas- and its followed by a Commentary section, an afterward by Zhang Bai and by an English-Chinese glossary. The commentary and the glossary are important tools which enlarged the explanation of China Principles, providing a standardize translation of the terminology used in the text both in Chinese and in English. These two last parts of the document can be seen, and interpreted, as a mirror of the three-years long international discussion and debate on heritage's related issues.

Going through the contents of the document, there are some concepts which are worthy to analyze as important turning point in the Chinese cultural heritage protection and management's discourse.

As first article, China Principles opens the document offering a precise definition of what is considered heritage sites: "Heritage sites are the immovable physical remains that

were created during the history of humankind and that have significance; they include archaeological sites and ruins, tombs, traditional architecture, cave temples, stone carvings, sculpture, inscriptions, stele, and petroglyphs, as well as modern and contemporary places and commemorative buildings, and those historic precincts (villages or towns), together with their original heritage components, that are officially declared protected sites." Adding "modern and contemporary places" *China Principles* did a step forward in enlarging the composition of the heritage categories from which was the definition of cultural heritage as expressed by the 1982 Cultural Relics Protection Law.

If on one side, article 1 wants to look at the future, Art. 2 looks back at the Chinese tradition and past. In accordance with the very beginning of the cultural heritage protection practice, the second article remarks the two main concepts, proposed first by Liang Sicheng, which represent the very basis of the Chinese Cultural heritage protection practice. If Liang Sicheng in his pioneering career wrote "keeping the present condition" and "restoring to the original condition", China Principles proposed at Art. 2 "all conservation measures must observe the principle of not altering the historic condition" and remarked in art. 19 that "the main goals of conservation and management measures are to preserve the site's existing condition". The commentary insists retaining the historic condition of heritage sites as a legal requirement in the conservation of heritage. The concept of retaining historic condition involves both the preservation of the existing condition and the restoration of the historic condition, adopting this duality in conservation decisional process as conceptualized by Liang Sicheng. The commentary gives then more details in guiding the decision on the duality of the position of the conservation practice. In somehow, China Principles clarified the concepts which 1982 Cultural Relics Protection Law approximately enounced in Art.14: "the principle of keeping the cultural relics in their original state must be adhered to in the repairs and maintenance at the sites designated as the ones to be protected for their historical and cultural value". The "original state" was subjected to many discussions and its indeterminacy brought to different interpretations. The historical authenticity, in fact, is one of the main points of discussion since the beginning of the contemporary practice discourse and, as confirmed by the interviewed scholars who participated to the China *Principles* project, this was one of the main issues of debate during the charter's drafting

process. Over the discourse on the authenticity many are the Chinese and Western scholars who participated to the discussion and wrote contributions; among them, Zheng Ju³⁸ 's position well resumes the historical evolution on the authenticity principle debate. In an interview released in 2016 to Getty Conservation Institute journal he responded as follow to a question regarding the preservation of authenticity with respect to China's built heritage: "In general, the authenticity of the state priority protected sites has been well preserved, thanks to the national policy throughout recent history. As early as 1932, Liang Sicheng, the pioneer of Chinese heritage conservation, held that the best way to protect a historic building was to preserve it in its "current condition," which can be understood as the earliest principle of protecting authenticity in China. This idea was elaborated upon in national policy papers in the 1950s and 1960s. In 1982, when the first Law of the People's Republic of China on the Protection of Cultural Relics was issued, the principle of maintaining the historic condition of heritage sites—retaining the authenticity of a site—was prescribed. Because the term "historic condition" leaves room for different interpretations, the first version of the Principles for the Conservation of Heritage Sites in China [...] made this explicit. This clarified the long debate on "historic condition" and was fully adopted in the revised version of the China Principles." (Levin 2016). The principle of authenticity is a notable criterion for the evaluation of the heritage and it represents the very basis of the historical development of the theories and practices on heritage discourse at international level (Lu, 2014), we can find its root in Venice Charter³⁹ and its enshrining conceptualization in a dedicated international document: the 1994 Nara Document on Authenticity. Among the debate on the concept of the heritage authenticity, the 2000 edition of China Principles widely embraced many aspects of the

³⁸ Zheng Jun is director of the secretariat of ICOMOS China. Prior to joining the secretariat, he participated in a number of conservation projects in China, including the joint Dunhuang Academy–Getty Conservation Institute project for conservation of Cave 85 at the Mogao Grottoes. He has also been active in the revision of the Principles for the Conservation of Heritage Sites in China.

³⁹ From Venice Charter 1964: "Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions. People are becoming more and more conscious of the unity of human value and regard ancient monuments as a common heritage. The common responsibility to safeguard them for future generations is recognized. It is our duty to hand them on in the full richness of their authenticity." Art. 3 The intention in conserving and restoring monuments is to safeguard them no less as works of art than as historical evidence; Art. 9: The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins."

international discourse enacting them in different statement of the document such as: "physical remains should be conserved in their historic condition without loss of evidence", "appropriate aesthetic criteria should be observed", "the setting of a heritage site must be conserved", and "a building that no longer survives should not be reconstructed" (ICOMOS China 2004). As remarked by Lv Zhou, these statements largely refer to the tangible aspects of the heritage conservation process, confirming, at that time of the Chinese heritage discourse, the commitment limited to the material remains of the national cultural legacy, position which will be partly changed in the 2015 revised version of the *Principles* (Lv 2014).

With regard of the theme of the values, art. 3 says: "The heritage values of a site comprise its historical, artistic, and scientific values" (ICOMOS China 2004). Many scholars have pointed out that China Principles, at least the first 2000 version, proposed a values-centered methodology, defining heritage just adopting the three historically accepted values by the law (Li 2020). The critics addressed to China Principles 2000 which are mostly driven by the fact that the document did not move forward from the position of the Chinese legal tradition. Keeping these three categories of heritage values meant to positioning China Principles in continuity with Chinese Law which, since the 1961 Regulations, adopted historical, artistic and scientific values as the only three categories of the heritage's values to be protected, denying the will to evolve as it would be expected by having Burra Charter as model. In Chinese legislation concerning heritage there is no mention about the cultural value even if its understanding and its practical recognition has a long date within Chinese society since the interactive relation between nature and human is deeply intertwining in Chinese Philosophy. Li (2020) argued that before the Thirty's, when predominantly Western-trained professional architects took the lead on Chinese heritage research, environmental heritage and built remains coexisted in the concepts of "famous scenic spots" and "historic sites", being legally protected and recognized by the 1929 Famous Scenic and Historical Sites and Relics Preservation Regulation Law⁴⁰ issued by the Nationalist Government. In broader terms what was at the

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⁴⁰ The 1929 Famous Scenic and Historical Sites and Relics Preservation Regulation law issued by the then Nationalist Government listed three categories of "famous scenic and historic sites," including well-known mountains and lakes and all nature-associated landscapes, historic architecture, and sites of historic remnants (Li 2020).

time internationally recognized as an imbalance of the World Heritages List composition between cultural and natural heritage sites, and what gave form- during the Nineties'- to an enlargement of the site's categories- justify by the cultural value- to be eligible as World Heritage sites (like cultural landscape and cultural routes), were already present in the Chinese Culture as category rooted in the national culture (Li 2020; Lv 2016).

Lacking a heritage category's value suitable to the peculiarities of the Australia heritage composition, ICOMOS Australia adopted the Burra Charter41 still in 1979, revising it in 1981, 1988 and in 1999, and adapting the "cultural significance", already present within the Venice Charter⁴², to the Australian specificities. But as Lv Zhou specified, there is a different understanding between Chinese and Australian ways to intend "Cultural significance": "Australia 's understanding of cultural value is vastly different from that of China. Historical value will remain the focus of mainland China in many years to come. Ignoring or diminishing historical value would cause confusion and might undermine China 's conservation efforts" (Lv 2014).

As reported by Kuanghan Li (2020), after many discussions on the argument, the final version of *China Principles* did not accept to add nether the "social value" as a new category of the heritage. Again, this was because social value was not named among the national legislation and many scholars were feeling uncomfortable to diverge from the law. The acknowledge of the social (and in part economic⁴³) value, in the end was

⁴¹ Art. 1.2: Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups (ICOMOS Australia 1999).

In the Burra Charter cultural significance means "aesthetic, historic, scientific or social value for past, present or future generations". Cultural significance is a concept which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past or enrich the present, and which will be of value to future generations. Although there are a variety of adjectives used in definitions of cultural significance in Australia, the adjective s "aesthetic", "historic", "scientific" and "social", give n alphabetically in the Burra Charter, can encompass all other values. The meaning of these terms in the context of cultural significance is discussed below. It should be noted that they are not mutually exclusive, for example, architectural style has both historic and aesthetic aspects. (ICOMOS Australia 1999).

⁴²Art. 1: The concept of a historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or a historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with them passing of time (ICOMOS 1964).

⁴³ "Also, there was fear that economic value (or benefit) of a site, if identified, might be used to justify inappropriate development. However, social value is mentioned in the Commentary (Agnew et al. 2016).

expressed by the Art. 4 referring to it as "benefit for society". This has been confirmed in first person by Agnew Neville and Martha Demas during the interview. More precisely Agnew Neville argued that: "The issue of the values was among the biggest differences in understanding that emerged during the project: which values to articulate on the document. Within Chinese Law texts, just three values are mentioned as attributed to heritage: artistic, scientific and historical. The big discussion arose around the new typologies of heritage values brought by the Burra Charter, used as model to draft *China Principles*, especially the social value. That was something that Chinese professionals working with us were not feeling comfortable on. So, they didn't want to add this value to the document of *China Principles*. That was a stumbling block and the way they solved it was to use the phrase of "benefit to society" 44.

If, from the point of view of the values the first edition of *China Principles* showed to be in continuity with the Chinese tradition and legal regime, from the point of view of the heritage protection and management practice the document brought an effective and detailed methodology approach and introduced a systematic operational criterion for the field work (Li 2020; D'Ayala, Wang 2006). *China Principles* provided solid conservation procedure which, as stated by Art. 5, "has to be carried out according to a sequential process". The process is lately explained by Art. 9, as developed in six steps: "(1) identification and investigation; (2) assessment; (3) formal proclamation as an officially protected site and determination of its classification; (4) preparation of a conservation master plan; (5) implementation of the conservation master plan; and (6) periodic review of the master plan". The conservation process is showed through a clear scheme in form of Flow Chart [Figure 1.8] and presented within the Commentary section as visual explanation of Art. 5 (ICOMOS China 2004).

According to Dina D'Ayala and Hui Wang (2006), *China Principles* provided a systematic approach to the assessment and repair phases of the historic remains, keeping as key concept the integrity of structure; the application of techniques and materials previously proven; the record and the collection of the historical and intervention during the intervention process; the respect of historical alterations, and imperfection in historic

⁴⁴ See paragraph 1.4.1 GCI. Interview to Neville Agnew and Martha Demas

building; the limitation to the intervention and the minimum damage to heritage value and the minimum replacement and limitations on disassembly.

As Sharon Sullivan remarked (2001), the debate around *China Principles* showed, in somehow, the continuity with the Chinese tradition in using" the past as didactical device, a tool to understand the present and plan the future" which, in conservation practice, it is translated in a higher level of intervention than is conceived in western tradition. If before the heritage conservation in China was believed to be a series of scientific treatments to be done just in case of necessity, later one, thanks to China Principles, systematic monitoring and maintenance activities became a used practice of the preventive policy (Agnew et al. 2016). So that, China Principles provided a strong professional guideline even in terms of physical conservation procedures, while on the side of the managementone of the weakest points of the Chinese heritage practice- the international project offered the opportunity to raise awareness trough field work and workshops. Moreover, the Principles make clear the crucial role of the management in the long-term conservation and provided a number of articles that relate to this aspect, trying to move from an over sectored system viewed as a separate activity from conservation, to an integrated value- based managerial system (Agnew et al. 2014; Agnew et al. 2016; Sullivan 2001). The Chinese managerial system, being traditionally very hierarchical and segmented, showed an evident lack of coordination between the different departments. China Principles, emphasizing the management issue, helped to enhance the managerial system building cooperation between different local governments and stakeholders, a subject that, at the time, was not well receiving too much attention on international heritage conservation charters (Sullivan 2001; Levin 2016). Another important acknowledgement, which Sharon Sullivan believes the most important element brought by the charter, is the official recognition of the importance of the assessment prior to the managerial decisions (Sullivan 2001).

To conclude this overview on the charter project, it is important to remark, as stated by Lv Zhou and by Sharon Sullivan, that *Chinese Principles* represents a Chinese product. It is the first non-regulatory charter written by Chinese heritage professionals for their colleagues and it has been drafted on the basis of real needs and heritage system of mainland China (Levin 2016; Sullivan 2001).

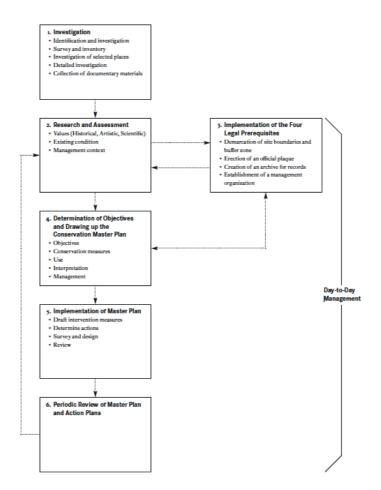


Figure 1.8 Flow Chart of the Conservation process proposed by China Principles (ICOMOS China 2004, p. 77)

1.5.2 Revised China Principles 2015

As declared by Agnew Neville- still in the foreword of the 2004 bilingual edition-, *China Principles* is a "living document", a charter which is naturally adapting itself to the changing needs of the Chinese heritage conservation process. Since it not a static document, the collected experience on its practical use revealed, over the years, the need to adjust it according to the changing Chinese society (ICOMOS China 2004).

China Principles is a living and changing charter because the project itself is an inprogress process which did not ended up with the publication of the guidelines. In fact, a second, and not less important phase, started after the release of the *Principles*. Once the *Principles* had been formally adopted with the approval of State Administration of Cultural Heritage in September 2000, it started the diffusion of the document among the

high-level heritage professionals along with the application phase, which saw the testing of the principles in key Chinese sites (Agnew, Demas 2001; Agnew et al. 2014; Agnew et al. 2016). As first step in the dissemination process, in 2001 was held a seminar in Beijing. Around 40 professionals, among academics, site managers, and heritage officials from all around China, attended the workshop and discussed around national current conservation issues. As reported by the news: "Presentations ranged from restoration practice, to the conservation of historic precincts, vernacular architecture, and archaeological sites, and the integration of cultural and natural heritage preservation. Project team members Neville Agnew and Martha Demas of the GCI and Sharon Sullivan and Kirsty Altenburg of the AHC participated and presented papers on the international experience and practice at sites in Southeast Asia, Australia, and Africa. GCI Director Tim Whalen and Associate Director Jeanne Marie Teutonico attended the opening, as did SACH Director-General Zhang Wenbin and Deputy Director-General Zhang Bai, who stressed the significance and timeliness of this international collaboration" (Agnew, Demas 2001).

Still in June 1999, before the official recognition of the document by SACH, China Principles found fertile ground where to be evaluated, in the site of Mogao Grottoes. Here, where the enduring collaboration between GCI and China began, new materials and methods for the conservation of wall paintings were introduced along with international researches and trainings. The Cave 85, a large Tang dynasty (618-906) cave on ground level, has been chosen as the first exemplar where to develop a prototype of master planning conservation strategies in accordance with China Principles process ⁴⁵. It represented an occasion to further discuss and improve the draft of China Principles, refining conservation and assessment procedures, and sites managerial strategies at macro level (Agnew, Demas 2001; Agnew et al. 2014; Agnew et al. 2016). China Principles have been applied and tested, at the beginning of their development also to another key site: the Mountain Resort at Chegde (GCI 2002).

Together with the application phase, workshops and seminars continued to be

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⁴⁵ The project followed China Principles processes: research resulting in an assessment of significance, of the conservation status, and of the management environment, followed by diagnosis of physical problems, testing and development of potential physical and management solutions, and implementation, monitoring and maintenance (Agnew et al. 2014).

organized in order to engage the Chinese heritage professional figures to the adoption of the *China Principles*.

The ten years which followed the publication of the *Principles* where characterized by the maturation of the field work practice and by the development of the theoretical discussion along with an increasing engagement within the international heritage discourse. According to this mature vision of the heritage practice and in order to address the new needs arising from the society, SACH and ICOMOS China felt the necessity to renew the Principles. As confirmed by Agnew and Demas during the interview, the revisional process was firstly proposed by China and mostly carried on by Chinese professionals, leaving to the Getty Conservation Institute a consulting and revisioning role. The aim was to update and clarify the principles in light of recent thinking and practice in China and to better reflect on the international understanding that now prevails about what constitutes cultural heritage.

Assuming the role of advisor, the Getty Conservation Institute organized, as part of the revision process, a workshop in the United States dedicated to the core members of the revision commission (Agnew et al. 2016). The study tour enlarged the exploration of the heritage site's categories toward a series of visits, meetings and discussions on the concepts of historic cultural landscapes, living heritage sites, memorial sites, cultural routes, and industrial and scientific heritage. The delegation was accompanied in Hawaii, to Los Angeles and to San Francisco areas to visit such different heritage sites such as twentieth-century industrial heritage regenerated sites (the Ford Assembly Plant in Richmond, California); sites of technological and scientific significance (the 1904 astronomical observatory close to Los Angeles and the Jet Propulsion Laboratory in Pasadena, California,); commemorative sites (Pearl Harbor in Hawaii); and sites representatives of social and cultural history (the Alcatraz Island prison and the immigration station on Angel Island, both in San Francisco Bay) (Agnew et al. 2016). The sites chosen for this second project phase of revision were illustrating a variety of values and different categories of heritage sites which were not considered within the first version of the China Principles, giving new inputs for a more comprehensive understanding of the heritage.

The revision of China Principles lasted from 2010 to 2014, the document was

completed in 2015 and contains forty-seven principles, an associated commentary explaining and amplifying each principle, and an updated glossary of terms. A bilingual version was prepared, designed, and published by ICOMOS China, with the GCI facilitating and editing the English translation.

The revised version of the Chinese charter brought key changes which mirrored the important evolution in values of the Chinese cultural heritage understanding. The main changes approved by the revision are: 1) an enlargement of the typologies of the heritage sites which now include modern heritage places such as industrial heritage sites and commemorative sites; 2) the inclusion of social value identified as one of the major heritage's values; 3) an greater attention is given to the intangible heritage and to his conservation as complementary part of the tangible side of the heritage in maintaining the authenticity; 4) a major accent is pointed out in the involvement of the public as relevant stakeholder in the conservation process; 5) the heritage conservation results will be used as criteria to evaluate the performance of the local government (Agnew 2014).

In order to better understand the enlargement of the new heritage categories included in this revised version of the China Principles, is first important to comprehend the acceptance of the cultural and social values among the three other traditional ones: the two things are interdepended. As stated by Lv Zhou during the interview released in 2016 for the GCI newsletter, "From 2006 to 2012 the Chinese government organized the cultural heritage Wuxi Forum, which focused on new categories of cultural heritage, such as cultural landscapes, cultural routes, twentieth-century built heritage, vernacular heritage, and industrial heritage. These heritage categories help people better understand the value of heritage." (Levin 2016). The acknowledgement of the social and cultural values enhanced the valorization of sites that before were not considered as part of the national heritage; vice versa, the more is enlarged the spectrum of the heritage sites categories the more is the engagement with all the five values now recognized by *Chinese* Principles. So that, art. 3 and art. 1 are results of the same dialogic evolution of the heritage discourse: the new heritage typologies are officially recognized because of there are new values as parameters to evaluated them; vice versa, the new values are authorized because of a major understanding of the intrinsic relevance of some heritage sites which values are not described by the historically recognized three ones. Art. 3 says: "Values.

The heritage values of a site are its historic, artistic, and scientific values, as well as its social and cultural values. Social value encompasses memory, emotion and education. Cultural value comprises cultural diversity, the continuation of traditions, and essential components of intangible cultural heritage. Cultural landscapes and heritage routes and canals may also have important natural values" (ICOMOS China 2015). The commentary to the article leaves no room for doubts in defining social value as "the value that society derives from the educational benefit that comes from dissemination of information about the site, the continuation of intangible associations, as well as the social cohesion it may create" and in expressing cultural value as "primarily derived from the three types of values" recognized in diversity (as revealed through ethnic culture, regional culture, or religious culture); nature (landscape and setting of a site that have been imbued with cultural attributes); site's intangible heritage (ICOMOS China 2015).

Tong Mingkang, President of ICOMOS China and Deputy Director of SACH, in the foreword of the 2015 Revised China Principles observed that the addition of the social value is the result of the evolution of theoretical research and on-site practice developed by China in accordance with the international heritage discourse. He argued that "In addition to cultural and social values that are attributed to physical remains of many heritage sites, social value is demonstrated when a heritage site generates social benefits in aspects such as maintaining knowledge and spiritual continuity and enhancing social coherence, while cultural value is closely connected to cultural diversity and intangible heritage. The concepts of cultural and social values have further enriched the categories and meanings of China's cultural heritage, and have played a positive role in constructing the value based theoretical system of Chinese heritage conservation".

While Tong stressed on the benefits for the entire society generated by the acceptance of these two new heritages values, Lv Zhou contextualized the cultural and social needs as two new heritage attributions categories strongly connected to the real needs of Chinese changing society: "The understanding of cultural value, in the revised *China Principles*, is consistent with the reality and need of China 's mainland cultural heritage conservation. It will guide the development of China's mainland conservation efforts and contribute to the establishment of a new evaluation system for the protection of cultural diversity and living heritage" (Lv 2016); the position of Zheng Zhu, instead, shifts the attention to a

more comprehensive understanding of the authenticity principle acquired after the adoption of the social and cultural values which, implicitly, give space to the conservation of intangible aspects too: "Conservation practice in China has been guided by these principles through a long-established professional consultation system, in which retaining authenticity has been essential for assessing conservation plans, project design, implementation, and acceptance. Along with recent developments in conservation theory, not only is the authenticity of physical remains now conserved, but also that of intangible aspects—the authenticity of use, function, spirit, and traditions is also retained." (Levin 2016).

With regard of the new typologies of heritage sites included in the charter, the art. 1 recognizes as heritage all the "the immovable physical remains that were created during the history of humankind and that have significance; they include archaeological sites and ruins, tombs, traditional architecture, cave temples, stone carvings, sculpture, inscriptions, stele, and petroglyphs, modern and contemporary sites and architecture, and historically and culturally famous cities, towns and villages together with their original components. Cultural landscapes and heritage routes and canals are also deemed to be heritage sites" (ICOMOS China, 2015). This implementation of the heritage categories is strongly connected to the new values understanding and contributed to enlarge the national cultural legacy enhancing the principle of the cultural diversity.

For what concern the involvement of the public in the heritage conservation project, the Art. 8 states that "Conservation of heritage sites is a social undertaking that requires broad community participation. The public should derive social benefit from heritage conservation" (ICOMOS China 2015). The social participation to the process means a broader engagement and commitment to the heritage preservation practice and its consequent better understanding within the entire society and not only among the professionals.

About the last important key element brought by the revised principles, the addition of Chapter 5 on the Appropriate Use (Art. 40-45) stress the attention on the sustainability and on social benefits of the conservation process⁴⁶, elements which, along with the

⁴⁶ Art. 40: Appropriate use. Appropriate use can be an important means of conserving a heritage site. Use should take into consideration the values, attributes, state of preservation and setting, as well as the possibility of the site being

achievement of heritage conservation, will represents criteria on the evaluation of the government's performance. This will give more decisional power to heritage professional figures within the local administration systems in the eternal confrontation between heritage conservation and economic and urban growth.

1.6 Current status of cultural heritage legal and administrative system in China

1.6.1 Current legal regime

The decade between 2000 and 2010 brought China to achieve a mature epistemological thought about cultural heritage conservation practice, but this was not mirrored by an equivalent evolution of the legal and managerial systems which developed much more slowly compared to the official heritage narratives (Su et Chen 2020). The Chinese heritage administrative system, still highly rooted in his planned-economy structure, presents three main characteristics: the public ownership, non-profit administration and impressively hierarchical management.

Whit regard of the legal protection of the cultural heritage, in 2002 the *Cultural Relics Protection Law* was largely amended, still representing the legal basis of the heritage system in China. The evolution of the heritage discourse, developed internally and internationally, had a strong impact, but not enough perceived on the legal level which remained basically unchanged.

The 1982 Cultural Relics Protection Law represents a benchmark on the Chinese cultural heritage legal regime, which no international commitments, neither national charters could scratch. In fact, the revision of the law made in 2002, just expanded the

used for research, presentation, continuation of original function or adaptation for an appropriate modern use. Use of a site should both be sustainable and promote community wellbeing. Overuse must be avoided (ICOMOS China 2015)

The commentary than states: "Appropriate use is an important means of maintaining the vitality of a site in contemporary society and life and is a means of promoting the conservation of the site and its values. Appropriate use is use of a site such that public benefit is emphasized within capacity limits and without changing its characteristics or diminishing its values. Sites need to be classified and categorized based on values, type, state of conservation and setting so as to determine appropriate use. Use of a site will attract more public attention to heritage sites in general. In addition to broad ranging social benefits, a site also creates economic benefits and promotes the development of the local economy. Sites are a commonwealth of society and as such procedures should be in place to ensure that they are used equitably and priority is given to its use for social benefit" (ICOMOS China, 2015).

number of the articles without bringing significant changes. The structure of the law remained almost the same and the 80 articles (a big enlargement if compared to the 33 articles of the 1982 edition) has been reshaped as follow: Chapter One: General provisions (articles 1–12); Chapter Two: Immovable cultural objects (articles 13–26); Chapter Three: Archaeological excavations (articles 27–35); Chapter Four: Cultural objects in the collection of public institutions (articles 36–49); Chapter Five: Cultural objects in private collection (articles 50–59); Chapter Six: Entry and exit of cultural objects (articles 60–63); Chapter Seven: Legal liabilities (articles 64–79); and Chapter Eight: Supplementary provisions (article 80).

Some scholars (Huo 2016; Zan 2014; Chai et Li 2019) recognized in four points the major changes imported by the 2002 amendment: 1) the revision remarked the importance of protection instead of exploitation as national priority on cultural heritage, scope of protection for immovable cultural heritage has been clearly defined; 2) administrative institutions for the protection of the cultural heritage have been established and identified so that the economic development has not to prevail on preservation issues and governments have to undertake under its responsibility the heritage preservation including it within the economic and social growth plans; 3) the cultural objects transactions are finally legalized, and the ownership defined, even if rigidly controlled; 4) the institution of cultural relics protection units and the protection institution of Historical and Cultural Landmark Cities are improved and completed.

Among the most relevant changes is worthy to say that starting from 2002 the agency named as responsible for the administration of Cultural Relics is the State Administration of Cultural heritage⁴⁷, the cultural heritage government institution under the State Council.

The 2002 revision of the law tried to respond to the real needs of heritage protection China was facing during the economic booming and the uncontrolled urban growth at the beginning of the 2000's. The major improvements are following a general purpose on strengthening cultural heritage protection, trying to prevent the- unfortunately- common practices carried out by some local governments of sacrificing cultural heritage for economic development. In pursuing that, the amendment reinforced the legal measures to

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⁴⁷ SACH administrative functions will be illustrated in the next paragraph: Current administrative system.

fight the crimes against cultural heritage (Huo 2016).

In this changing of perspective, it can be read a more mature awareness on cultural heritage protection issues, which echoed the deep national and international debates which were happening in the same years. In somehow the *China Principles* project not only raised the level of the discourse among the scholars and the professional figures, but also enhanced the institutional public commitment and make them to enshrine into the legislative system some of the major concepts discussed in those years.

Nevertheless, as remarked by Huo (2016) the revision of the law perpetuated some flaws of the precedent version, for instance the grading system. If the 1982 Law divided the Cultural objects in valuable and ordinary, without giving references to evaluate them, the 2002 amendment further size down the grading system in dividing the not better specified valuable objects in three different grades⁴⁸ according to their cultural relevance. Without a precise system of criteria within which to collocate the cultural objects the indeterminacy of the 1982 Law has been further sustained. According to the grade cultural objects are subjected to different administration and, because of the impossibility to uniquely identify their grades, the management of the cultural objects is still characterized by legal vagueness.

According to Shugang Liu⁴⁹, since the amendment of the Cultural Relic Protection Law, the SACH and other administrative departments of cultural relics belonging to different levels have further implemented legislative tools to enhance the protection on cultural legacy. In his vision, important achievements has been reached after the 2002 revision for what concern lawmaking works for cultural relics ⁵⁰ both in terms of quantities of laws and regulations both in terms of an acceleration of the local legislation;

⁴⁸ "Grade-one cultural objects are defined as 'especially important for historic, artistic, and scientific values', grade-two cultural objects are those cultural objects that have 'important' cultural value, grade-three cultural objects are 'relatively important' to China's cultural heritage, and 'ordinary' cultural objects are those that only have 'certain historic, artistic, and scientific value" (Huo 2016).

⁴⁹ Shuguang Liu was, at the time of his writings, Chief Director of the Central Administrative Department at SACH in charge of general administration, budget and financial affairs, international exchanges and cooperation. Between 1986-96 he was associate professor of Chinese Ancient History and Archeology at Beida (Peking University).

⁵⁰After the enactment of the 2002 revision of the Law around twenty-three new administration rules and regulations have been issued (Liu 2008). Among them some are worthy to mention such as *Regulation on implementation of the Law of the PRC on the Protection of Cultural heritage* promulgated by the State Council in May 2003 (see Regulation, 2003).

a strengthening of the effective fieldwork on cultural heritage protection practice (investigations, documentations, strengthening of safety controls, scientific research and professional training); an enforcement of works on key cultural heritage sites (in 2006 the State Council formally promulgated the sixth batch of Major Historical and Cultural Site Protected at the National Level adding 1080 sites to the national-level protected category, after an updated national survey); and a general improved quality on cultural heritage services (Liu 2008).

The *Cultural Relic Protection Law* of the People's Republic of China has been amended many other times ⁵¹ after the big revision of the 2002. Even if, not big changes have been introduced, the continuous amendments are significant since not many other Laws received the same attention by the central government (Huo 2016; Chai and Li 2019). According to the repeated revisions of the content of the Law over the past few years, China's legislation on the protection of cultural relics presents a trend of expanding the autonomy of the local governments. Moreover, through continuous amendments, China has gradually set a comprehensive legal system on cultural relics protection practice and an administrative framework which closely coordinate the central and local governments, partially solving on of the weakest point of the system emerged and denounced by the scholars during the *China Principles* drafting process. The general greater autonomy of local governments can be understood as a significant consequence of the central government raised awareness spread out after the national and international engagement of the scholars on the cultural relics protection practice in China developed over the decade 2000-2010, with respect to the *China Principles* project.

⁵¹ The Law has been revised in 2007, in 2013, in 2015 and in 2017 which gave more and more autonomy and power to the local governments (Chai and Li 2019).

1.6.2 Current administrative system

In order to understand nowadays Chinese cultural heritage protection's practice, it is necessary to contextualize it within the Chinese administrative system. In broader terms China, after the "Open Door" era enacted a series of administrative reforms⁵² which change the way in which administration was run and made the Country one of the most decentralized nations in the world (Zan 2014; Su and Chen 2020).

As consequence of the general process of administrative and political decentralization, but still influenced by a deeply hierarchical structure inherited by the times of the planned economy, the cultural field is working within a three administrative levels organization. At the local level (prefecture, municipality or town) a local Cultural Relics Bureau is established to report directly to the cultural department (which is responsible to report to the mayor). The professional relationships between local Cultural Relic Bureau with higher levels of the same functional department are few, so the CRB at the Province level, and the State Administration of Cultural Heritage are involved only in case of special projects, extraordinary events, or in a mere supervisory role (Zan 2014). The 2002 amendment of the Cultural Relic Protection Law established that the agency responsible for cultural heritage protection is the SACH, the cultural relics administrative department of the State Council of China, an influential bureau which has an independent status from the Ministry of Culture (Huo 2016). As reported by Shuguang Liu (2008), beside a general overview-duty of the SACH on the national cultural heritage management, the most important duties it is responsible for, are: "to formulate a national business development plan and correlated administrative system and methods; to guide and coordinate through works concerning management, protection, rescuing excavation, research and publicity of cultural sites and monuments; to review and approve archeological excavation programs and instruct cooperation exchanges between museums; and to research and formulate administrative methods for the movement of cultural relics and legally manage examinations of cultural relics leaving the country".

The SACH superintends at central level the general national policy and management regarding cultural heritage, but it has weak impact on the everyday life of cultural heritage

⁵² For a comprehensive study on Chinese administrative reform after the "Open Door" era see Xue, Q. & Zan, L. 2012. *Opening the Door to Accounting Change. Transformations in Chinese Public Sector Accounting.*

local institutions (Zan et Bonini Baraldi 2012; Zan 2014, Su et Chen 2020). Beside few institutions directly managed by the SACH, the heritage field, as previously mentioned, is highly decentralized with a consequent declination of the managerial, operational choices and responsibility given to local governments. The regional level of the heritage management system works through 31 provincial-level bureaus which namely work on behalf of the SACH, but in reality, they have a very high level of independence. The 31 regional-level agencies ("regional" is used as broader term but it is intended as all administrative levels which are equivalated to the regional government level within the Chinese administration division, such as provinces, autonomous regions or municipalities directly under the central government) govern over provincial museums and research institutes (Shen et Chen 2010). Regional heritage bureaus have very little to do with lower level cultural heritage agencies, as a consequence of the general process of decentralization. So that at the bottom of the pyramidal system at the local level (intended as prefecture, municipality or town) there are Cultural Relics Bureau, working independently from the higher level, which have to respond to the same administrative level authorities, which in the end are governed by the major. So, if the national cultural heritage management system is vertical and has a pyramidal and hierarchical structure in terms of general policies and funds, the everyday work has to respond to a horizontal responsibility-report system. (Zan et Bonini Baraldi 2012; Zan 2014; Su et Chen 2020). Acting as independent cultural bureaus which, in the very end, have to respond to the major of the municipality, the cultural heritage management is strongly submitted to the economic performance of the local government, lacking a vertical system of control and responsibility. Within this administrative and managerial frame, problems on conservation arise when to prevail is the economic and urban growth rather than the mission of heritage protection, when local governments set their own priorities for their best economic income. In a context of rapid urban growth and lacking an effective hierarchical control by SACH, cultural heritage protection is seen as a deterrent and a deceleration factor of the economic development, along with representing a conspicuous voice of expenditure within the local budget.

Every administrative level (national, provincial or municipal) of the SACH is responsible for the cultural heritage sites registered with the grade corresponding to its

administrative duty which are located in its territorial governance. With regard of the heritage classification, since 1961 a sophisticated, but not effective, evaluating heritage system has been set, dividing the immovable heritage in six classes (ancient cultural/archaeological sites, ancient tombs, ancient architectural structures, cave temples, stone carvings and murals and important modern and contemporary historic sites and memorable buildings), while categorizing the movable ones in four grades of relevance ("especially important for historic, artistic, and scientific values" are considered as gradeone cultural objects; "important' cultural value" are evaluated as, grade-two cultural objects and those characterized by a "relatively importance" to China cultural heritage are classified as grade-three cultural objects; then there are "ordinary cultural objects" which are those that only have "certain historic, artistic, and scientific value" (Huo, 2016). Among the geographical immensity of China and its millennial history, the diversity and the quantity of the cultural heritage is enormous. But it has to be specified that not all the historical remains are protected, just the ones which are labelled as "Major Historical and Cultural Site" are beneficiaries of the preservation as established by the Law. The identification and the registration of the sites works on the basis of national surveys. Starting from 1950, when the first cultural heritage census was initiated (and lasted a decade), China has completed eight surveys, the last one was finished in 2019, which originated eight batches of national key cultural relics protection units (Notice of the eighth batch of national key cultural relics protection units, 2019). The immovable national heritage is so classified in three categories according to its relevance, and- on the basis of its category- is then subjected in terms of management to one of the three administrative levels: Major Historical and Cultural Site Protected at the National Level, Major Historical and Cultural Site Protected at the Provincial Level and sites to be protected at county level. On the basis of the last survey published in 2019, the number of the cultural sites protected at national level are "only" 5,058, compared to the millions of cultural relics, immovable and movable, managed by lower level administrative authorities. The SACH is directly responsible of the sites registered as key national protected immovable heritage and of cultural objects classified as grade one. The rest of the national heritage is managed at lower administrative levels. This means that the majority of the expenditures, and also of the managerial choices, for cultural heritage are

taken below the province level. As demonstrated by Zan (2014) the 90 per cent of the expenses for cultural heritage, in terms of employees and operational needs, are processed at municipal level, this means that the majority of the national cultural heritage is managed at the peripheric level of the national system.

The administration system is even more complicated because of the overlapping of different jurisdiction in some heritage sites; in broader terms if the SACH is the institutional subject responsible for the administration and the supervision of cultural heritage at national level, within the multi-layered system, it can happen that cultural heritage management ca interest also the Ministry of Housing and Urban-Rural Development, the Ministry of Culture, the China National Tourism Administration, the State Archives Administration of China and the administration concerning ethnic affairs, education and military. Cultural heritage resulted so managed by multiple government, the resultant institutional ambiguity may leave room for potential conflicts which further weaken the heritage protection practice (Su et Chen 2020; Zan et Bonini Baraldi 2012).

For what concern the economic and fiscal aspect the Cultural Relics Protection Law demands local governments to undertake the economic burden of the protection of cultural heritage into their economic plans and to provide a budget for operational heritage-related activities (Huo, 2016). As previously noted, this means that most of the expenditures on heritage protection are provided by local governments and not by central institutions (Huo 2016; Zan 2014). This causes a not even distribution of the resources over the country. Since the local governments have to provide the financial sustainment for the cultural heritage activities and it can count mostly on its own financial power, only the most economic developed regions of China can effectively support their cultural legacy with adequate resources. This kind of administrative system in nowadays China may present region with abundant heritage resources, but limited economic funds, which will face important managerial problem than other wealthy region with less cultural legacy. The current fiscal system, and the relative lack of adequate revenues in local financial situations is highly problematic in light of a decentralized administration system which evaluate the local leaders according to their economic performance. If the local Cultural Relic Bureau's activity has to respond to the municipality major and the majors' career, within the CPC, is assessed by the economic performance, it is easy to assume that

CHAPTER 1 REPRODUCING THE DISCOURSE ON CULTURAL HERITAGE IN CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATIONS AND MODERN VALUES

economic issues will prevail on heritage protection issues (Huo 2016; Zan 2014). The decentralized administration system which subordinate local cultural heritage bureaus to the local governance, allocate the heritage conservation practice in a secondary level, putting the cultural heritage professional figures in a difficult position since their careers and salaries deeply depend by the local authorities. As clearly explained by Zan (2014), "this institutional design is largely responsible for heritage destruction related to building and infrastructure construction in the booming economy. Suppose the local administration is aware of economic development initiatives that have negative impact on heritage preservation: in this case, the professionals in charge of heritage protection have very little ability to resist such projects. They can try to stop them — through discussion and persuasion. In the end, though, the power of decision is in the hands of the mayor, as well as the career development and the assessment of their professional contribution"

CHAPTER 2 REPRODUCING THE DISCOURSE ON INDUSTRIAL HERITAGE IN CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTEMPORARY PRATICE

During the past two decades a process of speedy urbanization and deindustrialization has interested China and "industrial heritage" has attracted much more attention by government, scholars and institutions.

The industrial legacy is not regarded any more as a sign of recession, but it is now seen as resources to be reused and transformed into flexible spaces with the potential to enhance creative industry and new economies, such as industrial tourism (Wang et Han, 2009). As a consequence, the protection of industrial heritage in China is an important issue that is nurturing the contemporary international debate and, even more important, it represents a new goal for Chinese Government, being object of recent important regulations. The creative industry model has been strongly supported in recent times by Chinese institutions that have promulgated some important legal tools working at the national level (Liu et Zhu, 2015).

The Interim Measures for the Administration of National Industrial Heritage, formulated by the Ministry of Ministry of Industry and Information Technology is the most recent one, as a consequence of the Guiding Opinions on Promoting the Development of Industrial Culture, issued in 2016 by the same ministry (Cestaro et Bonino 2020). Among all the points of the document, it is important to mention here the need to foster a rational use of the national industrial heritage. The Interim Measures proposes the use of the national industrial legacy and related resources by opening museums in former industrial areas, developing industrial tourism and creating cultural parks in order to accelerate an innovative and entrepreneurial activity centred on the industrial heritage. Chinese institutions encourage a rational use of the industrial heritage as an important measure to promote the transformation of industrial buildings and to accelerate the transformation of the old plant energy into a new business model, in order to promote economic and social development with the aim of protecting the national

industrial heritage (Edwards, 2012).

After an overview on the local pioneering practice of Shanghai, Beijing and Guangzhou which developed their own dedicated policies, the chapter intends to investigate the development of industrial heritage protection strategies and policies at national level to arrive to define the constitutions of a new heritage category and its nowadays protection, reutilization and management process.

2.1 Industrialization and Reform Era. Some premises to understand Chinese industrial remains

2.1.1 Chinese Industrialization: some historical premises

As remarked by Liu Boying (2012), it is not possible to tackle the industrial heritage discourse in China without a deep understanding of Chinese industrialization progress and its impact on social and urban dimensions.

The history of industrialization in China is peculiar and it is no possible to refer to it adopting the same categories we use to refer to the western one, in particular to the European history. While for Europe it is obvious to take as historical starting point the Industrial Revolution- at the end of XVIII century- universally recognized as the beginning of modern industrialization process of the western world, to read the Chinese industrialization path it is necessary to change the historical paradigm. The industrial revolution in China started later than in the West; as Fairbank (1985) pointed out: "China's experience in the 19th century has become a complete tragedy, a truly huge and unprecedented process of collapse and decline." The scientific literature recognizes in 1840/42 the beginning of the modern Chinese industry, taking the end of the Opium War with Britain the establishment of a new form of industrial development, mainly driven by European investments and technology (Chen et al. 2016; Xu 2012; Que 2008). Scholars (Xu 2012; Que 2008; Liu 2012) agree in dividing into two main stages the Chinese industrial development, having a first period going from 1840 to 1949 and a second contemporary period developing from the Fifties to the beginning of the reform era, 1978. So that the first stage is named as "modern" and it has been further divided into four main periods: a first moment characterized by the emerging of China's modern industry and

industrial sector from scratch (1840-1894)¹, a second development period determined by foreign capital and the setting up of factories all around the country (1895-1911)², a third stage represented by a rapid development of private industrial capital, mainly driven by Japanese investments (1912-1937)³ and a last moment of difficult industrial progress during the War of Resistance and the civil war (1937-1949)⁴. The foundation of the modern China under the Chinese Communist Party in 1949 determined the turning point of Chinese history and, from the point of view of the industrial progress, it signified the transformation of the industrial sector into a socialist industry. In 1949 the young Republic of China was defeated by the Communist army and the new government attempted to industrialize the country adopting a Soviet central planning economy model.

According to many scholars (Gao et Jiang, 2017; Zhang et Feng, 2018; Han et Zhang 2020) which analyzed the evolution of the domestic scientific research on Chinese industrial heritage, there are two historically evident turning points in the categorization of industrial heritage: the first one is 1949, taken as breakpoint between the "modern" and the "contemporary" industrial development; the other one is the beginning of the Reform era, conventionally recognized in 1978 with the leadership of Deng Xiaoping. As remarked by Wen (2016), in 1978 Chinese economy was in the same poverty trap, with no significant increase of per capita incomes with respect to the Second Opium War. The adoption of a central planned economy during the Maoist era brought China to the edge of the economic collapse.

What is interesting to industrial heritage discourse, beside the understanding of the Chinese economic history, is the organization of the industrial sector during the period of the central planned economy and its significant changes brought by the marketization of

² In 1911 the end of Xinhai Revolution brought to the end of the Qing monarchy and to the establishment of the Republic of China, the first "inclusive" government in China based on Western-style constitutions. The new republic tried to industrialize China by adopting some of the American and Western political institutions, including democracy and the separation of powers. (Wen 2015).

¹ The Treaty of Shimonoseki allowed foreign capitals to open factories in Chinese territories, free from restrictions. This determined the loss of historical monopoly in industrial manufacture (Xu 2012).

³ The new founded of Republic of China had to face the divisions and turmoil brought by the Warlord Era which slowed down the industrialization progress.

⁴ Between 1937 and 1949 China saw the Second Sino-Japanese war and the civil war between Kuomintang and Communists, events which had very negative impacts on Chinese industrialization progress.

the economy during the eighties.

To understand the physical and legal characteristics of the nowadays Chinese industrial heritage, some premises and specifications on socialist industry and on consequences for the industrial sector after the Reform era, are needed.

During the fifties, China's economy started to be centralized on the basis of a socialist planning system. The industrialization model adopted by China came from the Soviet Union, but China's resources were far scarcer than the Russian ones. As reported by Li (2015), China had no other choice than the one to mobilize the population and distribute supplies to achieve industrialization. To do that, all the factories were turned into state-owned enterprises and rural land was distributed among the farmers organized in communes, where all the properties were shared and collectively owned.

While rural communities and peasants were organized in communes, the urban life was centered on the belonging to a work unit. Industries, universities and schools, government offices, all the urban productive and institutional entities were organized on the basis of *danwei* system⁵. Following the principle of the basic needs (food, fabrics, housing, education and wealth) supplied by the work units and the housing allocation system provided on the basis of the proximity, many of the factories had houses in the nearby residential area to allocate their workers and services within their plant complexes. This, as explained by Liu (2015), led to the formation of the industrial communities not only in a social sense, but also in a spatial sense. Following the national policy of "turning consumption- oriented cities into production-oriented cities", urban areas were transformed into production engines. The expression refers to a content published on People's Daily on March 1949, some months before the foundation of the People's

An important and comprehensive early study on the *danwei* is "The danwei: socio-spatial characteristics of work units in China's urban society" by E. M. Bjorklund, published in 1987. In his work the scholar deeply analyzed the work units, as the principal territorial forms used to organize China's urban population. In his essay he describes these enclosed spaces as socio-spatial units in which the livelihood, domestic and social activities of Chinese citizens are carried out. The *danwei* are described by considering the origins of the concept, the phenomenological meanings in contemporary society, the socio- economic-political characteristics, and their spatial implications in the transformation of Chinese society. Here his description of what a danwei was in his original asset: "A spatial organization problem, addressed early in the development of "new China" by the leadership, was whether or not to separate place of residence from place of work, as has occurred progressively in Western industrialized nations and in some Third World countries too. The Chinese tendency was to assign people to residences according to their workplace as much as possible. This has become the characteristic feature of many new urban industries and state-run enterprises in recent years. Wherever property acquisition can accommodate it, the workplace becomes the principal unit around which domestic and social activities are linked. Danwei has become a term used to signify this spatial integration of work, residence, and social life in cities organized by the Chinese Communist Party" (Bjorklund, 1987).

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Republic of China. At that time many Chinese cities were still in the period of the preindustrialization and this motto was shared with the hope that the new regime could have
driven the Country to a socio-economic development. It was an expression which referred
to the city and to the countryside as two opposite entities: while the countryside was
regarded as the productive area and the nation's socio-economic driving force, the city
was red as a bourgeois consumption center (Liu 2015). Thus, the new regime looked at
the city as a center to be restored for its productive functions and urban center started to
be planned and organized according to *danwei*. Industries played a central role within the
Maoist vision of the city's role, either for the socio-economic growth, either for spatial
development of the urban centers (Friedmann 2005).

Urban planning had to satisfied the demand of industrialization of the Country rather than other proper urban functions to the point that, in 1978, the 30% of the urban core land of medium and large Chinese cities was occupied by industrial sites (Hsing 2006; Chen et al. 2016).

Taking Beijing as sample, the 1953/54 Draft Planning for the Renovation and Extension of Beijing proposed the establishment of six new industrial areas to promote the city as key Chinese industrial base. The urban plan foreseen that the 23% of the total construction land area had to be occupied for industrial use. As result of the guideline plan, by the end of 1957, sixty-seven enterprises were covering almost 15 squared kilometers of construction land for industrial use within the urban area of the capital (Liu, 2015). Moreover, considering that housing and basic services like schools were provided by the enterprises, the strengthening of the role of the industry in Chinese socioeconomical path boosted the enhancement of the role played by enterprises, seen as small autonomous government within the cities. *Danwei* became small walled cities within the city areas.

2.1.2 Land politics in urban China

The economic reform, started in 1978, brought to a drastic shift from a central planned economy to a market one with Chinese characteristics. Starting from the late seventies and continuing for the following two decades the state-owned enterprises (SOE's) saw a decline. They represented the dominating sector of Chinese economy in terms of both production and urban employment, so they became the central focus for the success of the economic transformation of the country. But, it was all rather than easy. If some signals of the need to reform the SOE's had risen from economists even during the Maoist regime, at the beginning of the eighties, the experts all agreed that the SOE's must be transformed from socio-administrative units to independent economic entities (Huang, 2012). Due to their low economic performance, their high level of pollution and to the rapid increase of China's rate of urbanization, SOE's were accused to occupy valuable urban land which, at that time, was a precious resource (Chen et al. 2016).

In order to understand the process followed to relocate the production and the consequent need to deal with the problem of discarded industrial sites within urban areas, it is important to clarify the role played by the exercise of urban land rights after the amendment of the Art. 10 of the Constitution of the People's Republic of China in 1988. The amendment was an important historical shift which, although it confirmed the State as the only land owner, it recognized the possibility to obtain and transfer the land use rights (Huang 2012; Hsing 2006; Ho et Lin 2003). Starting from 1988 land use rights were separated by the land ownership (this one remained to the State). So that, it was possible to privatized the use of the land rights which became the most important driving force of the business activity in the newly born Chinese real estate market. Before 1988 all Chinese institutions and business entities, still organized on the basis of the *danwei*

On February 28th 1988 the Central Committee of the Communist Party of China invited the Standing Committee of the National People's Congress to confirm the amendment of Art. 10 (paragraph 4) of the Constitution and submit it to the first meeting of the Seventh National People's Congress for deliberation. In the Proposal of the Central Committee of the Communist Party of China on Amending Individual Articles of the Constitution of the People's Republic of China it is reported:

In order to support private economy as a supplement to the socialist public economy, the State protects the legal rights and interests of the private economy guiding, supervising, and managing the private interests. Article 10, Paragraph 4 of the Constitution: "Any organization or individual may not occupy, buy, sell, lease, or illegally transfer land in other forms." Amend to read: "No organization or individual may occupy, buy, sell, or illegally transfer land in other forms. The right to use land may be in accordance with the law Transfer." (CCCPC 1988).

system, received for free the land use rights. Thus, after the amendment of the art. 10 of the Constitution all these still alive organizations maintained the right to use the land received for free, having the possibility to transfer it to other parties, following real estate's economic rules and values. On the other hand, new real estate investors could pay to obtain the right to the use of specific urban sites. The authority entitled to superintend all the activities concerning the administration of the State's land was the State Land Administration Bureau which, at all Chinese administrative levels, had to issue the land registration certificate for the acknowledgement of any specific use. This agency played a very central role in the Chinese real estate booming.

Together with the 1988 amendment of the Constitution, another important law sets the rules of the Chinese urban land use and real estate investments. The *Land Administration Law*, issued in 1987, is actually the very first legal tool regulating the use of the land (Huang, 2012; Ho et Lin, 2003). This law recognized the property of the urban land to the State, while assigned the property of the rural land to the Collectives⁷. Citing Art. 1, this law "is formulated in compliance with the Constitution to strength the administration of land, safeguarding the socialist public ownership of land, protecting and developing land resources, ensuring a rational use of and giving a real protection to cultivated land to promote sustainable development of the socialist economy" (Land Administration Law, 1987). This legal tool ensured on the rational use of the land and on its protection, imposing to government agencies to articulate land use plans so to not convert cultivated land in other purpose.

In 1994 another regulation came into force in order to regulate the eruption of the real estate market: The *Urban Real Estate Law* was formulated to "strengthen the administration of the urban real estate, maintain the order of real estate market, protect the legitimate rights and interests of real estate obliges and promote the sound development of real estate business" (Administration of the Urban Real Estate Law, 1994). This regulation agrees that land use rights may be granted through auction, bidding or agreement between the parties concerned, encouraging auctions and biddings rather than the method of agreement between parties (Yuan, 2004). This is because the government

⁷ Collectives are intended as peoples as a whole in small geographical area. So that, the land under the jurisdiction of a village or a town is owned by the community of people living in that area (Ho & Lin, 2004).

is concerned that land use rights fee may not be correctly assessed if the matter is left to private parties to determine. In any case the *Urban Real Estate Law* establishes a minimum land use rights fee and prescribes that "the maximum term for the granting of the land-use right shall be prescribed by the State Council" (Administration of the Urban Real Estate Law, 1994).

Given these premises and considering the decentralization of fiscal and administrative system which occurred since the beginning of the Reform Era, land became one of the main vehicles for the local states to strengthen their authority and to consolidate the local administrative budget (Hsing, 2006). During the nineties urban politics were mirroring the changing relationship between the central state and the local governments, having the land use rights as battle ground. According to Hsing (2006) position, at that time the battle for land use right was played by two opposite actors: the representatives of the territorial governments and, what he called, "socialist land masters", a set of statist players represented by central-government agencies, Party ad military units and State-owned enterprises. These agencies, even if they are occupying a physical land under the jurisdiction of the local government, they administratively respond to their respectively vertical-structured authorities. Since the consolidation of the local power is determined mainly by the land development projects, the exercise of urban land right between the two state players, became a game of power and tension. During the planned economy period, budgets and resources were vertically allocated by the central state authorities; the decentralization of the administrative system made land urban policies the driving force of the territorial government's growth.

All this long premise is essential to understand the game of power around the land right use control of the dismissed industrial sites between local governments and State-owned enterprises, which- according to Hsing (2006)- are one of the most powerful challengers of the territorial states in the urban resource's competition. After the fiscal decentralization, which drastically resized the transfer of monetary resources form the central states to the local ones, revenues from land are considered the primary source of economic income to cover the expenses of urban infrastructures, social welfare, education and other social services. According to Ho and Linn (2003) study, in the late nineties the revenues related to the land represented, for the local authorities, the 30 to 70 per cent of

the total incomes of the sub-level government's budget. The incomes coming from the land were represented by taxes and transactions related to development projects; the local state, acting as a proprietor of the land under its jurisdiction, could fully retain the entire revenues from land, being these ones, not considered in the formal budgetary system (Hsing, 2006).

Within this administration and fiscal system, the land lease sales were directly representing the unit of measurements of the government's power: the bigger the land's area under its jurisdiction, the most influent was considered the local state.

To interfere the ideal monopoly of control on the land use right, there are the so-called socialist land masters having the state-owned enterprises among them, as the stakeholders interesting to our discourse. Dismissed or relocated industrial enterprises occuping some of the first-rated land in the core of urban area which not only detained the use rights on the land, but were behaving as decision-making actors on its management (Chen et al. 2016; Hsing, 2006). Between eighties and nineties about the 30 per cent of the urban center land was home to state-owned enterprises, the percentage of the land occupied by industrial activities was even more if we consider the related *danwei* system welfare structures (Ho and Lin, 2004; Hsing, 2006). According to Hsing study, the state-owned enterprises represented the most challenging socialist land masters to interfere with the local governments in the land use management and use rights. In fact, state owned enterprises started to organize their own development companies, enlarging their use rights and obtaining profits from land.

Starting from late eighties and exploding during the nineties a massive program of city center redevelopment was launched all around China. City planners, rehabilitated after years of vacancy in urban planning activity during Maoist era, with the support of the local governments, started to argue that inefficient, large and polluting industrial complexes should have been relocated from the city center to make room for high-incomes generating projects. But plants and *danwei*-structured industrial units, responding to a vertical administration system - not to the local power- and detaining the land use right of large urban portions, were reluctant to agree to municipal redevelopment projects, representing off-limits walled space occupying the most valuable urban portion.

Within this struggling battle for the control of the urban land use right, which finds

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root at the very beginning of eighties during the switch from a central planned economy to a market one, it is still possible to position the peculiar role of industrial plant within the urban planning of medium and large Chinese cities. It is essential to understand the role historically occupied by these enterprises and their debated legitimacy in order to be able to fully argument the nowadays role of industrial heritage sites in contemporary Chinese cities.

2.2 Industrial remains and creative economies: the pioneering roles of Shanghai, Beijing and Guangzhou in defining new urban strategies

2.2.1 Creative economies in China. An overview on the policies

First theorized by the Frankfurt School scholars Adorno and Horkheimer to identify the production of standardized cultural goods for masses (Schuetz, 1989), the cultural industries have developed their own meanings and ways of creating, producing and distributing cultural products during the decades until- during the nineties- creative industries were defined as those cultural industries in which creativity was playing a crucial role (Caves, 2004).

In China the commercialization of cultural products was missing as economic and social concepts from the foundation of the New China (1949) until the late nineties since cultural goods were seen as centralized tools promoted by the government to support the national ideology (Keane, 2009a). Even if, in 1998, the Department of Cultural Industries was founded under the Ministry of Culture, the shift towards creative industries can be traced only in 2003, when the *Scientific Outlook* policy was enacted by national government accelerating its efforts to transform China into an innovative high-income country (Yin et al. 2015; Keane 2009a). By the way, as reported by Keane (2009a) the term "creative industries" arrived officially in China only in 2006 when Li Wuwei, the Director of the Shanghai Creative Industries Association published a book titled

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⁸ As defined by Li Wuwei, "Creative industries are those industries that rely upon creative ideas, skill and advanced technology as core elements, increase value in production and consumption and create wealth and provide extensive jobs for the society through a series of activities" (Keane 2009a).

"Creativity is Changing China" (Chuangyi gaibian Zhongguo), later translated as "Creative industries are changing China" in English. But it was since the separation between state cultural agencies and cultural industries in late 1980's, that cultural reform became a primary issue for the central government (O'Connor, Gu 2006).

In December 2005, the CPC Central Committee officially released Several Opinions on Deepening the Reform of the Cultural System in order to leave space for the development of cultural industries and to clarify the roles of the government. This separation of the culture section from the central control of the State meant that arts and cultural institutions, before sponsored by the State, are now forced to find a way to survive in the market. The most important policy regarding the administration of capitals on cultural sector by private, public, national and foreign sources, was the 2010 Guidance on Financial Support of the Development of Cultural Industries, jointly issued by the Publicity Department of the CPC Central Committee and nine other agencies. As noted by Shan (2014) the fact that high-level institutions jointly issued such a document demonstrated the great apprehension of the central government in supporting and regulating cultural industry sector and the concern of actively promote and control key areas of the cultural industries. After that, also provincial and municipal governments started to set up specific funds for cultural industries development.

To support the formulation of such an unprecedented document, in 2009 the State Council passed the *Cultural Industries Promotion Plan*, which named cultural industry among the other national strategic industries (Shan 2014).

For that time, another similarly important document was the *Decision of the CPC Central Committee on Major Issues Pertaining to Deepening Reform of the Cultural System and Promoting the Great Development and Flourishing of Socialist Culture,* passed at the Sixth Plenary Session of the Seventeenth CPC Central Committee in October, 2011. Its deep meaning lies in delineating a reform of cultural organizations, moving them from public ownership to more diverse and mixed forms of ownership. Under the guidance of these policies, cultural industries have become a major task of government reforms (Keane, 2011). In the same years, technology innovations exploded along with Internet related industries developing new economic opportunities and work places.

In October 2010 the Decision of the State Council on Accelerating the Fostering and Development of Strategic Emerging Industries was issued, after premier Wen Jiabao held a conference, the previous year, about the development of emerging strategic industries (Keane, 2011). Cultural industries were seen as closely affiliated with these strategic industries including digital games, computer animation, digital literature, digital audiovisual, digital learning and processing of digital content. The report of the 18th Party Congress in November 2012 suggested fostering the integration of culture and technology, developing new cultural industries and enlarging the scale of cultural industries (Shan 2014).

2.2.2 Creative clusters and industrial remains: the development of a new urban strategy in Shanghai

Before People's Republic of China was founded in 1949, Shanghai was considered China's first cosmopolitan city, a status which was, and still is, reflected in its architecture along the Bund and in its peculiar dwellings along the "lilong" characterized by a unique encounter of western and oriental architecture. Contrary to the majority of the Chinese cities, Shanghai has activated, since the early nineties, a top-down strategy in preserving its urban cultural heritage in which the local government acted as main driving force. The very rapid economic growth led to an unprecedent acceleration of the urban development which interested, in particular, the very center of the city, where- according to the productive city conceived by the Maoist era-, many industries were located. Anticipating the national trend and policies which guided the delocalization of the production outside from the central urban areas⁹, Shanghai can be considered as a pioneer city in protecting and reusing industrial heritage as urban regeneration strategy. As well resumed by Feng and Wang (2009)¹⁰ the very first institutional action taken by the Municipal Government

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⁹ See the policy issued at national level by the State Council in 2014: *Guiding opinions on promoting the relocation and transformation of old industrial zone in urban areas*. See the paragraph 2.4. of this chapter "Legal regime on protection and management of industrial heritage in China. Premises and practice" in which the national policy is deeply and widely analyzed and discussed.

¹⁰ See: Mee-Kam Ng, Luan Feng, Yiyun Wang, Sheng Zhong, Jian Zhou, Weibin Liu & Mee-kam Ng (2009), "Tales from Two Chinese Cities: The Dragon's Awakening to Conservation in face of Growth? Debates and Compromises: Conservation and Development of the Northern Old Hongkou in Shanghai Historic Conservation and Economic Development: Are They Necessarily Rivals? - The Case of Suzhou Creek Industrial Heritage in Shanghai", Heritage Conservation in China's "Instant City", 10:2, 267-297.

of Shanghai was in 19991 when it enacted at the local level the *Regulations of Shanghai Municipality on the Protection of the Outstanding Modern Architectures*, subsequently amended and republished in 1997. This regulation represents a key factor in the future urban development of the city and a premise to the next legal tools issued by the municipality in guiding the conservation of the cultural and, later on, industrial heritage.

The 1991 Regulations and its amendments were followed in 2002 Conservation Regulations Regarding Shanghai's Historic Cultural District and Excellent Historic Buildings issued by the Committee of the Shanghai Municipal People's Congress. This new set of rules not only have further enlarged the selection basis of what was considered outstanding monument, but more importantly, they have also raised the requirements for protecting areas of historic and cultural significance (Mee-Kam Ng et al. 2015). Later on, in 2003, the local government officially approved the designation of 12 zones, within the urban core, of cultural and historical significance covering an area of approximately 27 squared km. These first institutional and juridical actions were accompanied by academic and social initiatives which incentivized the research in urban planning with an eye on heritage conservation and adaptive reuse.

So that, the protection of urban modern heritage became a common issue which has been integrated in urban development plan since a very early stage if compared to the national standards. Particularly, the Municipality of Shanghai, began very soon to integrate industrial heritage among the wider label of the cultural and historical heritage, showing an early understanding of the importance to intertwine the development of creative industry clusters and the conservation of industrial remains within urban strategies. At the end of nineties, Shanghai begun to see a spontaneous phenomenon of clustering of the art and creative activities within discarded industrial spaces. The development of urban growth and the booming of the real estate sector led to a raise of demand for affordable spaces within the central area of the city. At the same time, the abundance of under-utilized industrial spaces, left behind from the relocation of many polluting activities and by the effects of the eighties' economic reforms, pushed from one side artists to spontaneously occupy these spaces and, from the other side, State-owned managers to reinvent a way to raise income by offering cheap rents to be used for tertiary industry (Zheng 2010; Zheng 2011). During this process, two first areas of creative

clusters emerged: the riverbank area of the Suzhou Creek, spontaneously revitalized by artists and Tianzifang and Taikang Road Art District which was the result of a street office's culture-led urban renewal actions. In Shanghai, the clustering experience of art and creative activities began in the late 1990s, more as a bottom-up process rather than a government driven action. It was not until 2004 that the Municipality of Shanghai took proper actions to regulate and to incentivize what was define as "Chuangyi change jiju qu" (CCJQ), creative industry cluster. As well demonstrated by Jane Zheng's studies (2010; 2011), the term "Chuangyi change jiju qu" was borrowed by the local government to define a new typology of urban neighborhoods characterized by a high presence of creative and cultural services and related business. What before was a simply natural movement led by artists looking for cheap rents, it ended up to attract the attention of the local government which saw in this phenomenon a business possibility to increase the tax incomes through the development of new real estate projects led by industrial space renovation. As well explained by Zheng (2010), who deeply studied the role of the local government of Shanghai- which she theorized as "entrepreneurial state"- in the process of promoting creative industries as urban governance practice: "the local state is revenueoriented in nature and assumes a pro-growth role with an "entrepreneurial state" dimension exploiting CCJQs as a new type of urban revenue generator to stimulate urban growth and serve its own economic interests. Second, that the local state promotes growth in the number of CCJQs, marketing CCJQs and directly engaging in CCJQ investment rather than effectively controlling or regulating the CCJQ market as an independent regulator".

In November 2004 the Shanghai Creative Industry Center (SCIC) was established under the Economic Committee of the Municipality of Shanghai; entered in function in 2005, the SCIC was in charge to develop and regulate the growth of Creative Industries within discarded industrial spaces. Moved by the aim to increase the incomes¹¹ by the rent

¹¹ The basic mechanism for using CCJQs to generate urban growth leverages China's dual land use system. This system holds a significant disparity in the cost of land between administratively allocated land for state-owned institutions (1950s–1988) and leased land in a constrained market Land cost is particularly low to developers of CCJQ projects. This is because the land use rights and premises owned by SOEs are only charged land use taxes at moderate or low rates and are exempted from premise taxes, in contrast to the high land use fees charged on foreign investors Further, under the Chinese law, the transfer of land use rights of administratively allocated land to developers, which involves high compensation and land value appreciation fees (see Hsing, 2006; Zheng 2010; Zheng 2011).

of the industrial abandoned spaces to developer in charge to renovate spaces in order to create new real estate projects driven by the presence of creative services, the Shanghai Creative Industry Center, by the end of 2006, listed 75 local state-owned properties as Creative Industry Clusters (Zheng 2010; Zheng 2011). Following the principle of the policy *Three non-changes and the five changes*¹² the City of Shanghai maintained the land use rights on the properties of State-owned enterprises spaces, detaining also the relative revenues and allowed developers to keep low coast from the rental of these spaces, offering them big opportunities of business in developing new real estate projects (Zheng 2010; Zheng 2011). In more clear words, the label of "Creative Industry Cluster" defined by Shanghai Creative Industry Center's list served to legitimize the application of industrial taxation standards, even if applicated to a more profitable activity which was intended as manufacturing activity and not a commercial one, by the blur definition of "Creative Industry" which was not better specified (Zheng 2010).

Given these premises, starting from 2004 the regeneration of discarded industrial areas started to be part of the local government agenda which, thanks to the enhancement of the development Creative Industries, became a new urban governance driving force for urban growth. This led to a development of tailored central-city spaces whiting industrial legacy complex to accommodate tertiary industries raising the fashionable aura of the so called "Creative Industry Clusters", attracting new wealth dwellers, both companies or professional of withe-collar sectors. To sustain this urban strategy, Shanghai Municipality started to promoted the development of Creative Industries through official events such as the annual International Creative Industry Week and other flagship activities with the aim to showcase the achievements of this new creative business sector and to enhance the city's image and reputation as globalized metropolis (O'Connor; Gu, 2006).

As stated by Wang (2012), "the incentives given to developers were soon appreciated,

¹² To allow sufficient industrial building re-use under the title of 'creative industry development', the SCIC issued a new policy called 'three non-changes and five changes' (sanbubian wubian). 'Three non-changes' refers to no change in the 'ownership of premises', no change in 'building structures' and no change in 'land status' (tudi xingzhi) when SOEs lease their premises to CCJQ developers. 'Five changes' refers to changes in the employment structure, management, type of tenants, form of business organisation and enterprise culture in CCJQ developers' operations. This policy helps CCJQ projects to bypass the regulations and taxes on leasing administratively allocated industrial premises for commercial uses through land use changes (Zheng 2010; Zheng 2011).

followed by a city-level fever of industrial sites rehabilitation". From 2006 to 2009, 80 projects were completed and were granted as "Creative Industry Agglomeration Zones". Initiated by a bottom-up process guided by the necessity of local artists, the development of this spontaneous phenomenon allowed the municipality to gain awareness about the value of the industrial remains and their latent potential for real estate projects. So that, once the local government officially recognized the importance of industrial spaces, both from and economic and heritage's value point of view, a massive work of regeneration's projects took place. The bottom-up artist's movement left soon the room to a strong topdown strategy led by the local government which ended up to make Shanghai the lab where the first legislative actions and urban strategies for the protection of industrial heritage were experimented in China. Along with the urban strategy launched in 2004/ 2005 by Shanghai Creative Industry Center with the purpose to enhance the development of creative industries in industrial spaces, the municipality of Shanghai created a series of different labels to differentiate the typologies of official creative clusters, such as Cultural Industry Park, Cultural and Creative Industry Park, Incubator Space, Hi-Tech Industrial Park (Pinard, 2016). As showed by the data collected in "Shanghai UNESCO City of Design", in 2017 Shanghai has identified 128 city-level cultural and creative industry parks [Figure 2.1], 10 of which were demonstration parks (UNESCO, 2017).



Figure 2.1 Numbers of Creative Industry Parks by district distribution. (Source: UNESCO 2017, appendix 2)

As demonstrated by the study of Pinard (2016), the creative clusters are mainly located in the central portion of the urban fabric, more precisely near the Suzhou Creek and Huangpu River, historically the two areas where took place the main industrial activities of Shanghai.

The answer to the official promotion of the local government was a wave of industrial heritage regeneration projects which spread out in Shanghai starting from 2006, with the aims to conserve and aestheticize. The pioneering projects can be recognized in Bridge 8 designed by Tony Wong who was among the firsts to understand the values (historical and economic) brought by industrial heritage thanks to his previous experience in Xintiandi. The old brick walls of the industrial structure were kept and re-designed in an eye-catching way, while the different buildings of the warehouse were connected by modern bridges characterized by a creative use of the materials, colors and shapes. Red Town is another important regeneration project which saw the direct interventions of the Municipal Planning Department. As noted by Wang (2012), "although the buildings themselves were not of high value, a high standard of restoration and preservation principles were followed to portray the fabric, particularly on the decay, as if to treat

historic monuments". Another iconic project is represented by the old slaughter house in Hongkou District which, as soon as discovered, it became a crucial regeneration design project in Shanghai, if not know nationwide. Designed by British architect Balfour in 1933, the slaughter house was the largest modern slaughter house in all Asia. Its architectural features mixes Art Deco appearances on the main façade with Modernism way to conceive the specific function. An intertwining series of concrete walkways, designed as production sections links where animal could walk, a vertical labyrinth developing around the central courtyard [Figure 2.2], represented an incredible possibility for the creativity of the architects to redeveloped the space. Considering the historical and the architectonical values of the building, in 2005 the slaughter house was labeled as Distinctive Historic Building by the municipal government. The legitimization of its historical value gave to the Shanghai Creative Industrial Center an official industrial heritage site where to work on, thing which created an enormous enthusiasm and boosted the understanding and social awareness on the importance of industrial legacy conservation (Wang 2012). To emphasize its important historic value, the Shanghai Creative Industrial Center coined the name "1933 Old Millfun" for the slaughter house.



Figure 2.2 Shanghai, 1933-Old-Millfun. (Source: https://www.timeoutshanghai.com/venue/Around_Town-Historical_Buildings/22803/1933-Old-Millfun.html)

Perhaps, one of the best-known industrial heritage sites converted into a cultural cluster is M50, which story in somehow recalls to the path made by 798 district in Beijing. The site was a former textile industry which still conserves warehouses, weaving factories, a boiler but also offices and a canteen for the staff. The conversion started by a bottom up process initiated by a group of artists which, during the Nineties, moved their studios from the so-called Red House¹³, another warehouse which was demolished, into the dismissed space located in 50 Moganshan Road, which gave the name to the art district [Figure 2.3]. That was the time in which they formed an avant-garde artistic community, which has been later recognize as a turning point in early Chinese contemporary art (Wang 2012; Pinard, 2016). The rent of spaces and a stable contracting with galleries allowed sure income to the factory management which was considering the group of artists who first settled there as a welcomed and desirable dweller (Wang 2012). But the government's plan for this area was different since the municipality intended to urbanize the industrial site. Similarly, as happened for 798 District, as soon as the threat of the demolishment was becoming reality, the community of artists and in this case, supported by the factory management, put together a series of simultaneous efforts to fight for the conservation of the site. As for Beijing, a conservation plan was submitted to the municipality, supported and consulted by Ruan Yisan, the leading professor in Historic City Planning at Tongji University. As reported by Wang (2012), who interviewed the scholar: "Ruan is also probably the first scholar who realized the power of political connections. His profession as town planner afforded him numerous opportunities to communicate with officials of planning departments at all administrative levels, many of who were his students. Comments and notes from the supervising institutions, many at the central or provincial levels, guaranteed full implementation of Ruan's conservation-driven planning". Also, in this case, as it happened for the 798-art district, the joint forces of the art community and dwellers together with the support of intellectuals with strong political influences and connections, represented a strong asset which allowed to win the battle against the demolition of the industrial sites. In both cases a conservation plan was submitted to prove the high historical and social value of the sites and to instill in the municipalities mind the

¹³ Originally, artists settled in two industrial buildings from the early twentieth century located just in front of the Suzhou creek, one of the warehouses was called Red House.

idea of regenerating the urban fabric through the conversion of industrial heritage into creative hubs.



Figure 2.3 M50 industrial spaces converted in art spaces and galleries. (Source: http://www.digitalkaleidoscope.in/2017/06/explore-shanghai-m50-moganshan-lu-art.html)

The success of the urban strategy promoted by the local government arrived in 2010 when Shanghai was nominated as UNESCO City of Design, finally achieving a status which put the city among the most culturally relevant of the globalized metropolis in the world. Moreover, in the same year, Shanghai hosted the 2010 Expo in some iconic industrial site along the Huangpu River. It is meaningful that industrial heritage sites were designated as the location for the mega-event. As noted by Cheng (et al. 2016), the Municipality of Shanghai was concerned with its international reputation as a global city. The binomial Industrial heritage and creative industries became a win way to compete with other large international and national cities. Expo 2010¹⁴ can be considered as the most relevant flagship event used by the government to actively promote the local cultural influence. And industrial heritage represented an important vector to amplify the message.

Shanghai China", Frontiers of architectural research, 2013:2, 107-115.

¹⁴ For a comprehensive understanding of Shanghai Expo 2010 as mega-event and its consequences on the industrial heritage conservation and urban regeneration see: Deng, Y. and Poon, S.W. 2012. "Expo 2010 Shanghai China: a signature chapter of the Huangpu riverfronts trilogy", Journal of Place Management and Development, 5:2, 174-191; and Deng, Y. 2013. "Conceptualizing mega event flagships —A case study of China Pavilion of Expo 2010

At the same time, the Expo represented also an important occasion to protect and transform the functional layout and spatial structure of the industrial heritage along the river, making it an iconic landmark of the city, enhancing the social awareness about the intrinsic (cultural and historical) values and the economic values (tourism benefits and financial incomes) brought by the conservation practice of industrial legacy.

The adaptive reuse of industrial heritage for creative industries became a way to avoid the destruction and revealed to be the strategy to preserve the industrial legacy of the city, anticipating what will be later recognized as a strategy at national level. What happened in Shanghai was a very important lesson for the future of industrial heritage in China. The local government became aware about the strong historical value of its industrial legacy as witness of the city history. As well noted by Yu (2012) and remarked by Pinard (2016) these remains recalled the urban and economical history of the city and, once discovered their intrinsic cultural, historical, social and artistic values, instead to crystallize Shanghai's urban development, they contributed to add economic value and architectonical identity to the city, enhancing its urban growth through regeneration projects. The protection of industrial heritage performed as an important pillar to preserve both the identity and the urban memory of the city.

2.2.3 An early bottom-up practice in Beijing: the 798 Art District case

The post-1978 reforms and the following opening up policy brought Beijing to play more and more the role of the national political, institutional and cultural center rather to be a productive industrial city, until the 1992 master plan officially re-designed the Chinese capital as a modern international city. So that, polluting plants were ordered to relocate production, leaving behind a large amount of discarded industrial land. It has been estimated that, from 1985 to 1997, approximately 60 hectares of industrial land were left behind after relocation of enterprises and the 70% of that land was located within the city center (Feng et al. 2008; Yin et al. 2018). Later on, after China won the bid for the 2008 Olympic Games, the relocation of enterprises accelerated in order to respond to the aim to present a "green" Olympic venue: from 1999 to 2005 more than 150 industrial plants moved the production out of Beijing, leaving 900 hectares of vacant land within the fourth ring road (Yin et al. 2018). Among them, the abandoned site of Factory 798,

located in Dashanzi District, just 10 km north of the city's diplomatic area and 20 km southwest of capital airport, represented a massive industrial discarded land¹⁵ in a very strategical zone of the city [Figure 2.4].

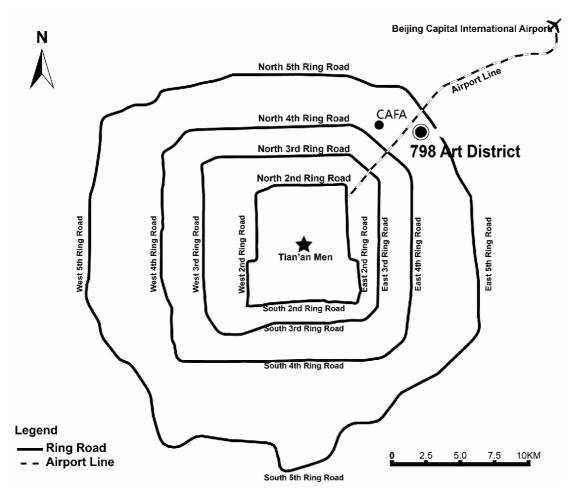


Figure 2.4 Location of 798 Art District within Beijing map. (Source: Dai et al. 2015, p. 5289)

It was the land occupied by one of the national strategic projects known as "Beijing North China Radio Equipment Factory" also named Factory 718 after its military code. The Joint 718 Factory¹⁶, divided in six production sites (718, 798, 706, 707, 797 and

¹⁵ Originally the factory was covering an area of one million square meters of land (Dai et al. 2015). After the relocation of the production the area left behind was about 600.000 square meters (Yin et al. 2018).

¹⁶ See the sites n. 1 and 2 of the Second List of National Industrial Heritage issued by the Ministry of Industry and Information Technology presented by the census in chapter 3 of this study. See also sites n. 12 and 13 of the database (APENDIX IV). The two sites listed by the Ministry as national industrial heritage were two production units of the &18 Joint Factory.

751¹⁷), was established during the Fifties as one of the main venues for army services; over the years it developed many key components of China's first atomic bomb and manmade satellite along with being the birthplace of many military electronic components such as all the loudspeakers of Tiananmen Square and Chang'An Avenue. Planned, constructed and put into operation with the help of East-Germany, the plant -the biggest in Asia of its typology-, was considered the "157 Key National Project" named after the fact that it was not driven and sponsored by Soviet Union- as the other 156 well noted National Key projects-, but, instead, it represented the biggest collaboration with German Democratic Republic (Yin et al. 2018; Dai et al. 2015; Luo 2004). Li Rui, the first Director of the joint plant remarked that: "only 3 of the 156 construction aid projects that New China had signed with Soviet Union had been designated to the electronics industry. [...] Later we started to call Factory 718 "Project Number 157" and, although this name had not been deserved as much, we knew that this was an immense project and it needed to be well executed and completed. That is why in the process of the design, this factory became larger and larger" (Li, 2004). As reported by Luo Peilin¹⁸, the Head Engineer of Joint Factory 718, this project coasted to the Chinese government a total amount of 147 million RMB during the Fifties (Luo, 2004).

The factory complex included 130 squared kilometers of plant extensions plus other 500 squared kilometers of worker's living dwelling and services. About the daily life inside the industrial complex, Karon Morono Kiang¹⁹ (2004), in his introduction to the book *Beijing 798*, reports this remarkable word: "Inside its walls, production wheels turned and hummed with the rhythm of a new anthem. There were no good reasons to don't think and feel this way. Anyone working in the factories was treated well, their benefits were ample and the quality of life was beyond what could be achieved if you

¹⁷ For a complete history of the 718 Joint Factory and the later development into 798 Art District see: Huang Rui (Ed. By), Beijing 798. Reflections on art, architecture and society in China. Beijing, Timezone 8, 2004.

¹⁸ Luo Peilin in his contribution to Beijing 798 book (see Huang 2004), reported these words: "The initial budget was estimated around 9 million rubles, which was approximately the equivalent of 140 million of new RMB. In reality, after it was completed 147 million had been spent on it" (Luo, 2004). Luo Peilin was a well-known scientist, returned to Chian after receiving a PhD in America. He was the head of the preparatory group for the Factory 718 complex from 1951 until 1953 and later on Head Engineer of Joint Factory 718 during its construction phase.

¹⁹ Karon Morono Kiang is a photographer, writer and curator based in Beijing who experienced the early life of the 798 Art District.

were not among the carefully screened and selected league of 798 factory employees. They were provided decent accommodations, social conveniences, sporting events, extracurricular activities, educational initiatives, medical clinics, dance halls, swimming facilities and, most important, a sweeping sense of that one was contributing to the building of a nation."

The Dashanzi Factory complex is the fruit of the communist block cooperation between China and East Germany, as defined by Eliot Kiang²⁰ (2004), it is both uniquely un-Chinese and Chinese at the same time. Designed by East-German architects and engineers, the buildings of the complex brought together something that in China, at that time, was missing: a sense of style and utilitarianism: "the architects designed an immense complex of military efficiency, cut with a subtle taste of grace and elegance. Their plans follow the primary Bauhaus principle- precisely- form follows function" (Kiang E. 2004; Currier 2008). Completed in 1957 by a great opening ceremony which saw the attendance of both Chinese and East-Germany leaders, over the years Factory 718 received the attention of many Chinese government representatives: being the biggest production site of electronics components in all Asia, it was considered a model and a showcase of the technological developments achieved by People's Republic of China in its early days (Zhang 2014).

In 1967 the plant was split up in six production sites (706,707,718,797,798,751) and was put directly under the control of the Ministry of Machinery Industry which revoked the military name of "Factory 718" (Dai et al. 2015).

The economic reform policies brought by Deng Xiaoping during the eighties led the Dashanzi Factory to a slow decline in production and, consequently, to a large loss of work positions which decreased from 20.000 units in its historical pick to just 4000 by early nineties (Yin et al. 2015).

In 2000 Factory 798, the largest segment of 718 complex, saw a big change: from the status of central State-owned enterprise, it downgraded to be municipal-level state owned enterprise being directly managed by Beijing Seven Stars Group which specialized in high-tech electronics. In order to enlarge profits, after the resize of the production and the

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²⁰ Eliot Kiang in 2004 was partner in Celadon Edge, an art consultancy specializing in representing contemporary Chinese artists, engaged in long-term business in Asia.

employment, in 2001 Seven Stars Group started to rent out the empty spaces of the factory. In the meanwhile, during the nineties, a series of actions were taken to redevelop and revitalized the old industrial area into a new electronics industrial zone. So that, in 1992, the directors of many ex 718 Factory's enterprises jointly submitted to the Beijing municipal party committee and government a proposal to establish a new economic zone in the almost empty Dashanzi Factory. In January 1993, the Beijing Electronic Office proposed to create the "Beijing Electronic City" reusing the existing industrial spaces of 718 complex; in June of the same year the local government approved the industrial regeneration program. In 1996 the plan was jointly approved and issued by the Ministry of Electronics (now Ministry of Industry and Information Technology) and Beijing Municipal Government (Dai et al. 2015).

During the development of the transformation plan of Dashanzi zone into a new electronic hub, the story of 798 was already intertwining with the art world. The Central Academy of Fine Art (CAFA) was the first art institution to move in the discarded industrial spaces of Dashanzi, precisely the academy moved in 706 production plant, in 1995 (Kiang E. 2004; Currier 2008; Zhang 2014; Yin et al. 2015). As remarked by Zhang (2014) "a coincidental factor that has contributed to the growth of the art community in Factory 798 is the relocation of CAFA. To expand its campus, the CAFA moved out of the city center in 1995 and relocated to Wangjing, an area next to the East Fourth Ring Road, just West of Factory 798. The proximity of CAFA has brought many art professors and students to this area". From 1995 to 2001 a temporary CAFA campus was established in the industrial dismissed spaces attracting other art activities which found in that convenient location, cheap rents, unique architecture, a new suitable room to set studios and creative entrepreneurial projects in a peaceful working environment. One of the first artist to set his studio there, in 1997, was Sui Jianguo, sculptor and Dean of CAFA, followed then by many students and professors (Kiang E., 2004; Yin et al. 2015).

The turning point in the early days of 798 as latent art district was 2001, when Robert Barnell, an American expert of Chinese Contemporary Art, entered the space and rented a cafeteria of just 120 square meters where he founded his book store, "Timezone8", connected to his publishing house in Hong Kong (Dai, 2015; Yin et al. 2015; Shoshanan et al. 2018). The following year, in 2002, the world-famous Tokyo Gallery open an

exhibition space in 798 establishing the Beijing Tokyo Art Project (BTAP). Timezone 8 and Tokyo Gallery where the two first foreigner art entrepreneurial activities to open a space in Dashanzi District, inaugurating the route to many other creative industries which decided to move there. Again, in 2002 another key actor of the nascent artistic district moved its studio in 798: Huang Rui, a very well know contemporary artist, returned from Japan, who became one of the first artists to be allowed to establish a large workshop in the Bauhaus spaces. As he revealed to the author during the interview²¹, Huang recognized the high architectonical value of the discarded industrial buildings and, together with other artists, he became active in raising social attention and awareness on the fate of the place, which, as already approved by the Beijing Municipal Government, was supposed soon to be turned into the "Beijing Electronic City".

2002 was a crucial year for the history of the art district. Following Huang Rui sample, many other notable exponents of the Chinese contemporary art scene established their studios in Dashanzi: Cang Xin, Bai Yiluo and Cheng Linyang (Kiang E., 2004); moreover, in October of same year, the BTAP organized its firs art show "Beijing Afloat" which represented the prelude to very big changes in the space, and the art event which pushed many art institutions and independent artists to join 798, enlarging the scale and the fame of the nascent art district (Angremy, 2004; Dai et al. 2015).

Patrizia Bonanziga (2004), an Italian photographer based in Beijing at the beginning of 2000's, in her contribution to *Beijing 798* book, chronicled the night of BTAP's exhibition opening: "I perfectly remember the first time I went to Factory 798 in Dashanzi. It was October 2002 [...]. In the car, my friend Tang Di and I were wandering around the complex: an industrial zone where a new art gallery named Beijing Tokyo Art Project had opened [...]. At the entrance we arrived in a seemingly closely guarded area. The guard at the gate listened with detachment to our questions, as he seemed unware of this opening event. He pointed for us to go somewhere far away from him, and it was down a straight dirty road towards the end of the buildings, and we finally reached our destination. We walked through badly light corridor, which was long and full of rubble and debris. It was very cold. It was in all of this that I discovered Factory 798 and Dashanzi the New Art

²¹ See Interview to Huang Rui in APPENDIX III. The artist released the interview to the author in December 2021 in Beijing.

113

Territory- specifically Beijing Tokyo Art Projects. After exactly one year I returned to Beijing. Dashanzi has already become a myth: a place for creativity, for intellect and also for fun with bars, restaurants, bookshops, and outcropping of galleries. In only one year the light has surrounded these spaces that were darkened when I first set eyes upon them [...]. I find statues, symbols and slogans which refer to the factory and its previous activity [...]. These elements in front of my eyes become an integral part of this architecture: elements that keep alive the memory, which belong to this amazing space. I find shops selling new style clothes, small enterprises developing and working out new graphic styles and designs, schools organizing trainings courses and seminars, spaces giving birth to curator experiments, places where one can exchange musical experiences in night spots, bookshops where one can buy the latest publications and read contemporary art news, stay in tune with what is happening in the art world. I find workshops full of Chinese tailors. I find artist's studio apartments organized according to loft-style livening of New York. In some cases, the smell of room fragrance and herbal essence blend with fried cabbage and steam. I feel life is flowing here. The melting pot of activities, even if they are different from one another, makes this space a marvelous space".

As stated by Berenice Angremy (2004), a Beijing-based French artist, curator and- at the time first Executive Director of Dashanzi International Art Festival, "Beijing Afloat" marked the opening of the first museum-style gallery in 798, announcing the existence of a space alive to the exchange of art and culture, technology and enterprise: a site for public exhibition.

Between the end of 2002 and all 2003 in 798, art organizations, independent artist's studios, galleries, bookshops, cafés and restaurants began to multiplied- almost overnight-, naturally advocating the industrial area as the new art district of Beijing. Along with the fame of the nascent art district, important international magazines such as Newsweek or Time Magazine, contributed to echo the reputation of the site respectively ranking Beijing as the 12th world's (city thanks to its art district which contributed to redefine the global status of the city), and selecting 798 among the "Top 22 most vibrant art districts" in the world (Zhang, 2104). As remembered by Huang Rui during the interview, along with gaining international fame, in 2003 the artists obtained the local attention by launching *Reconstructing 798* an art festival [Figure 2.5], actually the only one public event to take

place during the 2003 outbreak of severe acute respiratory syndrome (SARS). Through this festival artists denounced the need to preserve the complex, openly putting themselves against the decision of the Seven Star Group and the municipal institutions (Yin et al. 2015; Shoshanah et al. 2018).



Figure 2.5 Poster of "Rebuilding 798" on April 13 2003 (Source: Dai et al. 2015, p. 5293)

All these recognitions and public engagement were disturbing Seven Stars Group, which plan was still to erase the area to build the new high-tech hub of the Capital. So that, in 2003, Seven Stars started to deny new leases to artists in order to prepare the ground for the demolition of the plant (Zhang, 2014). It was in this precise moment when the local community of artists pushed forward its action which to raise awareness on the

fate of the site and concretely helped to grow the understanding of the social, cultural and historical values carried by 798 District among the national and international audience. Organizing events, petitions and art exhibitions was a way to amplify the messages and the campaign anti-demolition, attracting the attention of the media along with the institutional visits of foreign politicians. As stated by Currier (2008), Dashanzi developed from being an underground village to represent an international art destination in less than 10 years, following an independent path which, in contrast to many other regenerated industrial plants (mostly established by top-down government plans), 798 obtained the title of Art District thanks to the active efforts of artists, art organizations, local community and government representatives' influence, all key players of a bottom-up conversion practice.

The answer by the Seven Star group to this growing national and international attention was the demolishing of some industrial buildings during the autumn of 2003. Following that, 2004 saw a series of important initiatives brought ahead by artists: as remembered by *Thinking hands* [Figure 2.7] was the name of the group founded by artists in 2004 to promote art and cultural events in 798 and to legally and financially support their engagement in demonstrating their opposition to the government plan. Lead by the artist Huang Rui, Thinking Hands, in the same year established *Dashanzi International Art Festival* [Figure 2.6], the very first independent art festival of Beijing, and published a book, *Beijing 798* as a collective memory of the industrial area's conversion process into an art district.²²

²² See Interview to Huang Rui in APPENDIX III. The artist released the interview to the author in December 2021 in Beijing.



Figure 2.6 The flyer of the first Dashanzi Art Festival in 2004. (Source: Dai et al. 2015, p. 5295)

Dashanzi International Art Festival gathered around 10.000 visitors in the art district showing how spontaneously the industrial site was already been converted and perceived as an art district, attracting more and more the attention of the public and of the media (Angermy 2004; Dai et. al 2015). As told by Huang Rui during the interview (Appendix III), the festival was organized in different thematic units each of them developing specific contents through an interactive and interdisciplinary dialogue between art languages and performances. One of the thematic units of the festival was dedicated to discuss issues of cities and urban development in an open dialogue with the community: "hence, we contributed to the debate with our views and we developed the notion that cities are a diverse ecosystem rooted in time, progress, interaction and mutual habitation.

It is an ecosystem in a process of continuous development, incorporating both modern and contemporary architecture and cultural memory"23.

Dashanzi International Art Festival and the book Beijing 798 represented two cultural products by the Thinking Hands group [Figure 2.7] which largely contributed to raise social awareness and which helped to change the mind of Beijing Municipality about the future of 798. This is a sample of how artists action led a bottom-up process to convert an industrial space into an art district.



Figure 2.7 Some of Thinking Hands group members, key role players of the 798's bottom-up conversion process: Huang Rui (center), Berenice Angremy (front row, third from left), Robert Bernell (second row, center), Karon Morono Kiang (front row third from left).

Picture by Liu Yiwei (Source: Beijing 798, 2004, p. 207).

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²³ See Interview to Huang Rui in APPENDIX III. The artist released the interview to the author in December 2021 in Beijing.

Together with *Thinking Hands* group, another artist resulted a crucial actor in leading the bottom-up initiative. While Seven Stars in 2004 officially stopped renting spaces to foreigners and cultural institutions along with taking actions to hinder the art district's development, in the same year Li Xianqun, a professor and sculptor of Tsinghua Academy of Fine Art which had a studio in 798, and deputy of the Beijing People's Congress, submitted a motion to the Municipality of Beijing asking to preserve the industrial heritage. (Currier, 2008; Zhang 2014; Yin et al. 2015; Shoshanan et al. 2018). He led a group of urban planner and professors of Architecture to submit a report to Beijing City legislature to stop the demolition and preserve what he already considered as industrial heritage: in February 2004 he presented to the Beijing Municipal People's Congress the proposal on "Preserving the architectural heritage of an old industry!" Keep a developing art district!" (Gong, 2005). As a consequence of all these important events promoted by artists, in March 2005 the Nineteenth meeting of the Standing Committee of the 12th Beijing Municipal People's Congress conducted a third review of the draft Regulations on the Protection of Beijing's Historical and Cultural Cities. An important interview by Gong Suyi, a columnist of Guangming Daily recorded the moment in which became clear to everyone that something was really changing in 798: in the occasion of the Beijing Municipal People's Congress the journalist interviewed Li Xianggun, Guo Qili (member of the Standing Committee of the Municipal People's Congress) and Yu Kongjian (dean and professor of School of Landscape Design of Peking University). The interview not only chronicled what was happening in 798, but also showed a nascent awareness around industrial heritage issue in China and its need to be protected. During the interview Guo Qili stated that "the identification and protection of historical relics in Beijing's industrialization stage should also be on the agenda. A lot of contributions have witnessed and recorded the history of Beijing's economic revitalization. With the adjustment of Beijing's industrial structure and the accelerated development of urban construction, some of them are about to be relocated, and some have already been relocated. The sites of these companies should be recognized and selectively included [...] Obviously, protecting these industrial relics that reflect the characteristics of the industrialized era and carry real and relatively complete historical information is not only a respect for the integrity of the nation's history, but also a commemoration of the historical contributions

of traditional industrial workers in New China and the inheritance of their noble spirit. Only by protecting the valuable historical remains of Beijing at different stages of development can a relatively complete urban development trajectory be left for future generations. Therefore, while protecting the historical and cultural heritage of our ancestors, it is also our incumbent responsibility to leave the contemporary Beijing style to future generations" (Gong, 2005).

During the 2005 (Gong) interview, Li Xianqun, were asked to tell more about the reasons behind the conservation proposal he submitted to protect 798 and he replied as follow: "this giant in the electronics industry, known as the first factory of the planned economy was a combination of the world's electronic technology and construction technology at the time. Based on this, in recent years, some artists have used part of the vacant workshops of the 718 Joint Factory to build the largest art district in China. We suggested that relevant government departments immediately stop the ongoing and planned large-scale demolition and construction of the 718 joint factory area. The reason is that most of the buildings here have maintained the original appearance of the buildings in the early 1950s. In addition [...] the factory invited 55 East German experts to project its architectural design and the most advanced architectural technology in the world at that time and Bauhaus design concepts were adopted. [...] it is a rare modern industrial architectural treasure. Many designers regard it as an architectural model that inherits and runs through structuralist aesthetics. In terms of the scale and completeness of its preservation, the 718 Joint Factory is one of the few remaining buildings of this kind in the world. From the stay of individual artists in the 718 Joint Factory to the formation of the art district, in just a few years, the influence of the formation has spread far and wide all over the world. The large number of artistic activities held here and the energy embodied as well as the charm of the building complex have made the factory area, which has been silent for many years, once again become a center full of centripetal force. A lot of contributions have witnessed and recorded the history of Beijing's economic revitalization. With the adjustment of Beijing's industrial structure and the accelerated development of urban construction, some of them are about to be relocated, and some have already been relocated. The sites of these companies should be recognized and included in the scope of protection of historical cities".

What is important to remark here is that the issue to protect industrial heritage was already felt as something to be added to the political agendas in early 2000. The campaign brought ahead by artists and by key player such as Li Xianqun, showed it first effects when, in 2005, the Beijing Municipal Government identify Factory 798 as a modern architectural heritage to be protected, making clear that it would seriously consider to review its position on transforming the area in an electronic cluster (Yin et al. 2015; Dai et al. 2015). The following year the site was recognized among the 30 industrial districts for cultural and creative industries²⁴ and in 2007 the local government officially promoted the development of the preservation and utilization of industrial heritage through the establishment of cultural and creative clusters (Zhang 2008; Yin et al. 2015).

It was within this official and institutional process of acknowledgement of the historical and artistic value of the Dashanzi District, together with the growing awareness of the industrial heritage discourse, that the president of Seven Stars Group also submitted a proposal for the protection and utilization of the industrial site, surprising the community of artists and the residents (Dai et al. 2015). Both the institutions and the ownership of the site realized the tremendous value of the area thanks to the bottom-up process led by artists which helped to raise social awareness on the historical and cultural importance of the industrial complex.

Despite the battle against demolition has been won, the impact of the acknowledgment of site's value brought quite big consequences on rents along with the designation of 798 as Creative Business Zone which drastically reduced the power of the artists within the decision-making process. Being officially labeled as creative space meant that Beijing's municipal department of Propaganda supervised the activities in the district, banning, for example the *Dashanzi International Art Festival* and launching a new festival directly controlled by the municipal censorship. Moreover, after a financial arrangement between Chaoyang District of Beijing and Seven Stars Group, the "Construction and management Office" was established to developed the business growth

²⁴ Michael Keane (2009b) in his analysis of the new creative cluster phenomenon in Beijing wrote: "In December 2006, Beijing's cultural and propaganda officials gathered at the Sheraton Hotel to extol the virtues of creative excellence."

Beijing's cultural and propaganda officials gathered at the Sheraton Hotel to extol the virtues of creative excellence and the shift from "made in China" to "created in China." Ten designated cultural creative clusters were announced, the representatives of these projects receiving silver plaques of excellence. This was an auspicious time. Beijing's coming of age in the creative economy signified a deepening of the creative zeitgeist".

of the complex and the commercialization of the area (Currier 2008; Yin et al. 2015).

As remarked by scholars (Zielke and Waibel 2014), and confirmed by Huang Rui during the interview, since the official endorsement by institutions, rents had constantly increased, forcing many of the art district dwellers to move out and look for new cheaper spaces.

But, if on one side many artists were leaving, on the other side, many galleries approached the new creative cluster attracted by the fame of the district. Before 2005 approximately only 20 galleries were inhabiting 798, most of them representing art institutions from Asian countries. Three years later the situation greatly changed seeing more that 150 galleries based in the new art district, a number which more than duplexed in 2008 when 398 art galleries and studios were registered in 798 (Zhang, 2014; Yin et al. 2015). A lot of the art branches which moved in the district were representing world-well renowned art institutions, such as Pace Gallery, Galleria Continua, MWoods Gallery and Guy and Myriam Ullence Foundation, thus enhancing the status of 798 as a global reference for contemporary art. Along with the art-related activities, lot of other businesses opened, enlarging the profits Seven Stars Group and changing the economic geography of the neighborhood. Moreover, global events such as the 2008 Olympic Games, strength the necessity to build a good image of the country and cultural enterprises became positive driving forces to help China to promote itself as global cultural spaces' promoter.

The case of 798 was among the firsts, if not the first important industrial complex to raise awareness and political debates on the general issue of industrial heritage conservation practice in China, an issue which- more that 10 years later- finally has been institutionalized with a proper procedure. Public pressure combined with the need to protect the environment, has amplified the need to reuse industrial sites and to consider them as regeneration accelerators within the new best urban practices in China. Thanks to an unprecedent bottom up process, different actors of the society (artists, local community, cultural entrepreneurs, national and international media and government representatives) were capable to change the fate of the discarded industrial sites. The presence of art-related businesses represented an add value to the site which helped Beijing government to look at 798 industrial space as a resource for the society when

reintegrated into the urban context.

2.2.4 Local legal framework for creative spaces: the case of Guangzhou municipality

On their deep analysis, Zielke and Waibel (2014; 2015; 2016), well reconstructed the historical sequence that brought China on raising its awareness about the relevance of creative industry. From their study it emerged that at the beginning of 2000's creative and cultural industries just represented a 2.5% share of the Country's GDP, data which became even more evident when "Global Creativity Index" was published in 2004 (Florida 2004), ranking China in 36th position among 45 Countries. Politicians and media started to discuss about the weakness of the creative filed, openly increasing the public awareness. Another factor that fostered the awareness on the need to give a structure to the national creative business was the leading position that China was playing among the art world. According to the auction's data, in 2010 the Country covered a key role leading the fine art's market, gaining in 2011, more than the 40% of share of the global art market (Ehrmann 2012).

Even if all the premises were favourable to elevate the creative industry's discourse to a higher level, China had to wait for isolated and bottom-up cases before to think to adopt a national strategy to regulated the new business field.

It was thanks to municipal level approaches that China saw the promotion of the creative industry. Beijing and Shanghai driven the process towards their positive and well know examples of creative clusters represented respectively by 798 Art District and M50, evolving from underground spaces of arts into common places of urban renewal. As just discussed, these two cases embody the first arenas where local art communities fought for the protection of the sites, showing and sustaining in broader terms the necessity to protect the national industrial heritage. As a consequence, many municipal governments around China gradually developed a corresponding institutional and legal framework helping to establish creative spaces as a new development possibility for urban planning, leading to an artistic urbanization.

If compared to other parts of China, Guangdong Region has started slightly later to deal with its industrial legacy, but, over the time, thanks to the development of a creative

industry's fever in Pearl River Delta, the region started to dedicate important strategies to support the regeneration of its industrial heritage to enhance creative enterprises. The first to attract the attention of the institutions was the Taigu warehouse, actually the oldest wharf that Guangzhou which is still in use, along the Pearl River waterfront in Guangzhou. It was 2003 when it was put under protection by the guidance of mayor Zhang (Zielke and Waibel, 2014). A year later in Shenzhen, OCT Holding, a state-owned real estate company, started to convert the industrial structures of the factory which became later know as OCT-Loft. As a consequence of the global financial crisis and, in line with the general belief- declared already in 2005 by the Prime Minister Wen Jiabao²⁵ - that it was necessary to promote independent innovation in order to create a system based on new economies-, in 2007 the Municipality of Guangzhou issued a specific policy to support the regeneration of its former industrial sites: Suppress the Secondary industry and develop the tertiary industry (Zielke, Waibel 2014). Anticipating what years later became a national imperative²⁶, the purpose was to invite industries to delocalize the production supporting the development of companies operating among the service sector, so to turn the city form a productive oriented one to service and consumption oriented one. Subsequently Guangzhou Municipality issued one of its main important policies which became a milestone among the tools adopted by government in supporting creative spaces and industrial heritage protection. It was published in 2008 as The three Olds Transformations policy. It represents one of the very first effective local legal tools in China to promote alternative urban planning strategies; it focused on transforming the historic city centre, the urban villages and dismissed industrial plants (Liu, Zhou 2016; Carota, Bruno 2020).

The introduction of both policies and a relative administrative and private system of funding, along with the awareness of the need to promote industrial heritage conservation

^{25 &}quot;The promotion of independent innovation (自主创新) is [...] the central link to adjust the industrial structure and to change the pattern of growth" Press release of the third meeting of the National Science and Technology Education Leadership Group, hold on 19th July 2005. http://www.most.gov.cn/yw/200507/t20050721_23362.htm, accessed on May 17th 2020.

²⁶ In 2014 the State Council issued Guiding opinions on promoting the relocation and transformation of old industrial zone in urban areas, a legal tool working at national level which substantially adopted and reinforced the rules for the relocation of production already issued by many local governments, like for instance Guangzhou. See the paragraph 2.4. "Legal regime on protection and management of industrial heritage in China. Premises and practice" in which the national policy "of this chapter.

IISTORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTEMPORARY PRAIL

and innovation, created a new enthusiasm for the establishment of creative spaces in Guangdong Province's discarded industrial plants.

2.2.5 Early samples of creative spaces in Guangzhou

If the early case of Beijing 798 saw a bottom up process and Shanghai showed an early development of local policies to respond to social and urban needs, but it also presented some cases moved by artists 'community action, in Guangzhou the practice was mainly driven by the local state without the active intervention of local communities.

This section will be dedicated to briefly understand the different roles played by the main actors in decision-making and urban governance within the development process of creative industries in industrial spaces in Guangzhou. The analysis will be based on Zielke and Waibel studies (2014; 2015; 2016) which utilized the concept of the "entrepreneurial state" developed by Jane Zheng (2010)²⁷ in order to give a theoretical frame within which to insert an inedited reading of the Pearl River Piano Cultural Park in Guangzhou which recently saw the transformation of the biggest piano factory in the world into a creative hub dedicated to the music.

Xinyi International Plaza

In 2004, Xinyi International Plaza became the first creative space founded in Guangzhou. The former owner passed the land to the Guangdong Minghuiyuan developer and, at this early stage, the role of the local state, Liwan District, was limited to the transformation of the land use rights. As Xinyi benefited from the "Three Olds", the role of the local state changed, gaining influence and more control as distributor and investor of public funds. In this case local state and private investor were the most influential key decision makers in the whole development process since both stakeholders jointly agreed to establish a public-private management association. These are strong indications of a corporatist governance mode as Zielke, Waibel (2014) conclude after applying the "entrepreneurial state" theory developed by Jane Zheng (2010).

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²⁷ Zheng (2010) analyzed the revenue-driven nature of the state and its role in transforming spontaneously emerging historic industrial spaces into revenue generators. See: Zheng, J. 2010. "The Entrepreneurial State in Creative Industry Cluster Development in Shanghai", Journal of Urban Affairs, 32:2, 143-170,

Taigu Warehouse Dock

The case of Taigu Warehouse Dock, as already mentioned before, is a unique sample since in early 2000's it attracted the first attention of the city's mayor who put it under legal protection in 2003. Built between 1904 and 1908 and nationalized in the 1950s, Taigu reflects both Guangzhou's colonial and socialist past. Joining the "Three Olds" and the "Tertiary Industry" principles, the site was transformed into a creative park by the former operator, the Guangzhou Port Group. In this case the local government, represented by Haizhu district, played a key role in decision-making process and later on as investor- with 100 million RMB of public funds-, while the figure of the mayor is less clear, but in any case, it can be read as a prominent political figure who helped the project (UPO 2010). From governance perspective as read by Zielke, Waibel (2016), it can best be described as an "exclusionary circle of powerful interests".

T.I.T Creative Industry Zone

T.I.T Creative Industry Zone maybe represents the best-known sample of creative parks in Guangzhou. Officially opened in 2010, T.I.T beneficed the effects of the "Three Olds" and the tertiarization policies. After the relocation of the production and the vacancy of the plant, in early 2000's, the property had firstly decided to dismantle the industrial legacy in favour of green public space. In 2007 thanks to the initiative by mayor of Haizhu and leading mangers of the Textile Holding, the demolition plan was replaced with the idea to convert the area into a creative space. The real estate developer Shenzhen Dealskey later joined them and the three stakeholders together invested around 200 million RMB. The governing relations among them might be described as "exclusionary negotiations" as they obtain the consensus by the local government pushing into its progrowth agenda perspective to transform T.I.T into a creative space for fashion design and taking advantage of the from the proximity to the Zhongda Textile District, the most important textile cluster in Guangdong (Zielke, Waibel 2016).

Redtory Art + Design Factory

Redtory Art + Design Factory followed a different path, similar to the bottom-up cases of 798 in Beijing and M50 in Shanghai. It began when the influential architect and

designer Sherman Lin, founder of the Newsdays firm, rented spaces in the almost dismissed state-owned canned food factory (own by Guangzhou Eagle Coin). This decision encouraged a group of local artists to follow the example and move there their studios, pushing the district administration to prefer the conversion of the area rather than to demolish it and gaining the institutional support of the city's Mayor, Mr. Zhang. This first phase of the negotiation can be described as a consensus-oriented decision-making. Furthermore, Sherman Lin and his colleagues, prepared a plan to convert the industrial buildings into an art district; the project has been presented to the local People's Congress and Redtory was finally granted by a protected status until the 2019, thank- also- to the personal involvement of the Mayor Zhang. This case gained benefits from the *Three Olds* policy and the land was accordingly transferred from Guangzhou Eagle Coin to the local state, Tianhe District. The local state then delegated tasks to a management unit, having Newsdays ad advisor, so public private interactions appeared to be well regulated and the influence of the pioneering artists still very strong. The political patronage of mayor Zhang ended with his term in office: his successors dismissed the plans of an art district in favour of a Guangzhou's International Finance City. This is characteristic of an informal personalism and particularistic exchanges (Zielke, Waibel 2015). By the way the status of protected site expired by the end of 2019 when, after a period of disputation, local authorities ordered the eviction of all properties located in Tianhe art hub and announced that parts of the art complex would have been designated for demolition.

1850 Creativity Zone

The 1850 Creativity Zone is another example of creative space development in Guangzhou. The name "1850" refers to the fact that the city was the 4th largest urban economy in the world in 1850, but It can be assumed that the catchy name was needed more recall those of 798 or M50 rather than for historical reasons. Three main stakeholders are involved in the project: the operator of the former chemical factory, a private real estate company and the local state. 1850 also benefited from the *Three Olds* policy implemented by the district government. The development started in 2009, when Liwan District reached an agreement with the former operator, the state-owned Guangzhou Chemical Industry Group and the developer McWalts with regard to

restructuring the plant. They jointly invested about 160 million RMB. Similar to the development of the adjacent Xinyi site, the three stakeholders established a public-private partnership company, the "Guangzhou 1850 Creative Property Investor" responsible for the physical and commercial development of the site and its daily management (Zielke, Waibel 2014). Despite it has been labelled as creative space, the small proportion of creative industries allocated inside make it as one of many real estate projects using creativity to attract investments.

Pearl River Piano Cultural Park as new cultural cluster in Guangzhou

As seen in the previous section of the chapter, Guangdong Province, in particular, Guangzhou Municipality confirmed its pioneering approach in the creation of a dedicated policy to support the regeneration of its former industrial sites. The delocalization of the production and the transformation of the industrial legacy into creative hubs characterized the urban governance lines of the metropolis.

The latest planning documents clearly confirm this attitude: the *Medium and Long-Term Talent Development Plan of Guangzhou* (2010-2020) aspired to attract innovative industries and talents in order to consolidate the city as a "global talent pool" within the national and international context. Likewise, the latest *City Renewal Masterplan* (2015-2020) supported by the planning of innovative industrial and creative parks among its crucial strategic interventions (Bruno, Carota 2020).

Among the latest developments that confirm this innovative trend of the municipality, the regeneration project of Pearl River Piano Cultural Park is worthy to be mentioned. The transition of one single enterprise from industrial mass production toward creative and entertainment business by the conversion of its former spaces involved a large number of private and public stakeholders. The author has been personally involved in the process thanks to her participation to the research design activity she joined as Politecnico di Torino's team member, so the data and the process hereby described have been personally collected and have already been published.²⁸

²⁸ See: Cestaro, G.; Bonino, M. 2020. "An Italian Space in a Chinese Industrial Legacy: Designing the Italian Cultural Box within the Pearl River Piano Cultural Park", *UrbanNext*, April 2020.

Guangzhou Pearl River Piano Cultural Park Management Company was established in June 2017 as an exclusively owned subsidiary of Pearl River Piano Group, in order to manage daily operations in creating an innovation hub for cultural industries ranging from music making, filmmaking, and art education to animation making, game design, fashion and media (Bruno et Carota 2020). In contrast to the previously described cases of Redtory and TIT, the Pearl River Piano Group did not act merely as a landowner aiming to invite third-party players to manage the investments. Due to the fact that it incorporated a new management role, the huge state-owned enterprise saw the opportunity of drawing from its entrepreneurial history, widely expert in the music industry, to bring it closer to the nascent creative and entertainment sector, thus opening up the field to new investors. In the same year of its foundation, the Pearl River Piano Group launched an international competition to gather design proposals for the redevelopment of its former industrial plant. The Politecnico di Torino and the Design Institute of South China University of Technology jointly participated, winning the first prize among 20 other proposals. The project reinterpreted the original plant structure, combining seven clusters into 130,000 sqm of built area: music industry chain, film industry chain, multimedia piano museum, education and training, business incubators, cultural and entertainment events and supporting facilities. The local legislation on industrial heritage regeneration project does not allow to enlarge the site's floor area ratio with new building interventions. For this reason, the proposal for the Park was conceptualized in reconnecting the built environment with its surroundings, maintaining the layout of its indoor spaces, transforming its former industrial fenced isolation into a new outdoor public arena (Bruno et Carota 2020). The construction began in 2018 and was completed in November 2020.

Considering the theoretical framework built up by Zielke and Waibel studies (2014; 2015; 2016) and the concept of the "entrepreneurial state" developed by Jane Zheng (2010), Pearl River Piano Group acted simultaneously on two fronts: the entrepreneurial one and the design one. In order to attract cultural producers, retailers and other investors to join the project, they exploited the symbolic value of the design proposal for marketing purposes.

When the universities' team won the competition, an open discussion was established between the Italian team of designers and their clients. This was the starting point for a

long process of public relations and international cooperation between the two organizations, which was also extended to other institutional and business parties, such as the Italian Consulate in Guangzhou and the Municipality of Torino, among others. Within this frame is important to understand the changing role played by the academic Italian team, initially involved as designers, it has lately been engaged as negotiator actor between many other stakeholders (Cestaro et Bonino 2020; Bruno et Carota 2020).

In April 2018, a delegation of representatives from the Municipality of Torino and the Politecnico di Torino visited the Pearl River Piano Cultural Park joining its higher managerial representatives for an institutional meeting in which the parties expressed the intention to develop their joint future cooperation. In November of the same year representatives of the Pearl River Piano Cultural Park visited the City of Torino and Politecnico di Torino, declaring their willingness to formalize an agreement with the aim to develop a physical space called the "Italian Cultural Box" within the Pearl River Piano Cultural Park. The agreement established that the Pearl River Piano Cultural Park Co. Ltd. would provide a 300sqm space for the promotion of Italian culture within the former factory, as well as its basic maintenance, for free. In return, the Municipality of Torino and Politecnico di Torino promote the involvement of Italian business and cultural partners interested in operating in China to join the effort and to directly manage the "Italian Cultural Box".

In summary, the university team's cultural intermediation had, at a micro-level, a symbolic power over the Pearl River Piano senior management and some Italian business enterprises by influencing their perceptions of the value of Italian culture on the one hand, and the Pearl River Piano Cultural Park' business opportunities on the other, while the design of the factory was acted providing symbolic capital to support the perception of its expertise (Cestaro et Bonino 2020; Bruno et Carota 2020).

2.3 Industrial Heritage in China: defining a new category of the heritage

With respect to the western tradition regarding industrial heritage as proper typology of heritage to be protected, only in the latest years China arrived to officially develop a mature discourse on industrial heritage defining its protection towards a series of national guidelines, regulations and policies.

The rapid economic transformation and the rampant urbanization made more and more industrial buildings and industrial relics emerging in China. The inheritance of the Maoist productive city with massive discarded plants within the core of urban agglomerations represented an important issue of the contemporary Chinese urban planning and urban regeneration processes which institutions tried to tackle developing important regulations. Supported by an incrementation of the national scientific research²⁹ on industrial heritage along with the evident problem on how to deal with industrial building in Chinese city cores, the central government started to pay attention on the national industrial legacy starting from the beginning of the XXI century. Besides some local and autonomous experiences on industrial heritage protection and management brought ahead in early times by Shanghai, Beijing and Guangzhou- which gave birth to local regulations and policies primarily devoted to the regeneration of the industrial building in spaces dedicated to the newly born creative industries-, it was only by 2016 that China started to develop legal tools at national level to manage its industrial legacy.

According to the report published in the 32 Bulletin of the International Committee for the Conservation of the Industrial Heritage (TICCIH), the Chinese authority action for the protection of the national industrial heritage started in 1996, when "Modern Monuments, Sites and Representative Architectures" was created as one of the categories in the *Fourth List of National Protected Monuments and Sites* (Que, 2006). For the first time, in 2001, two industrial properties were listed as sites to be protected in the *Fifth List of National Protected Monuments and Sites*, and five years later, in 2006, nine industrial

131

development of China's industrial heritage research.

²⁹ See Han, M; Zhang, J. 2020. "Research progress on the protection and utilization of industrial heritage in China", The Proceedings of the 2020 Industrial Building Academic Exchange Conference, 2020 Industrial Architecture Academic Exchange Conference, Beijing, 2020-11-2, Vol. 2, 32-37. (In Chinese). The paper is based on the data of journals in the database of CNKI from 2002 to 2018, combined with the literature analysis method to summarize the

properties were recorded in the following list. In the same year, on April 18th, the 2006 International Day of Monuments and Sites held the Industrial Heritage Day. In that occasion the National Cultural Heritage Bureau of China and ICOMOS China had the first official meeting to discuss about the national industrial heritage protection. The location of the meeting was itself a modern industrial town along the Grant Canal in Wuxi, Jiangsu Province; here, over 60 scholars, heritage site managers and officers attended the conference, discussed and proposed the Wuxi Recommendation, which became the first chartered document to protect industrial heritage in China. The meeting marks that the protection of industrial heritage in China has started: the congress's notes, after the revision and the promulgation by the State Administration of Cultural Heritage, became the first constitutional document on industrial heritage protection (Leadership decision information 2006; Xu 2012; Ha and Zhang 2020;). The Wuxi Forum responded to the growing debate on the lack of a common ground in understanding industrial heritage in China. The symposium gave a first definition of the Chinese concept of industrial heritage to address this issue: "The industrial heritage contains both the tangible and the intangible industrial remains of historical, sociological, architectural, technological or aesthetic value, including factories, workshops, mills, warehouses, shops and other industrial structures; mines, processing and smelting sites, energy production sites, transmission and usage sites, transportation facilities, social activities sites with industrial production, industrial equipment, production technology, data records, enterprise culture. [...] Since the First Opium War, there have been various industrial remains left as the legacy of all phases of modern industrial construction in China, which constitute the principal part of China's industrial heritage, witness and record the change and development of modern Chinese society" 30 (State Administration of Cultural Heritage 2006; Lu, Liu et Wang 2020).

Along with the charter, the forum had another immediate result: nine modern industrial heritage sites have been listed on the Sixth Batch of the National Key Cultural Relics protection units (Leadership decision information 2006).

The Wuxi Recommendation represented a first guideline to develop a Chinese

 $^{^{30}}$ The translation of the original document has been provided by Lu, Liu et Wang 2020, p. 502.

practice for the protection of industrial heritage; The "Wuxi Recommendations" adopted at this forum proposed that the survey and evaluation of industrial heritage should be carried out as soon as possible; important industrial heritage should be announced as cultural relics at all levels in a timely manner, or registered as immovable cultural relics; a special plan for industrial heritage protection should be prepared and incorporated into the city's master plan in order to ensure a rational use of the historical value of industrial sites (Leadership decision information 2006; Old city, Industrial Heritage, Protection policy Research 2016).

The recommendation of Wuxi opened a new chapter on the protection of cultural heritage in China. Finally, industrial heritage became a new label of the national heritage and started to be defined as an independent category to be protected. After the promulgation of the Wuxi Forum notes by the State Administration of Cultural Heritage, Industrial heritage became a constitutional issue, defined by legal tools. One month later, in May 2006, the State Administration of Cultural Heritage issued another important document to officially promote the protection of Industrial Heritage at a national level. The Notice of the State Administration of Cultural Heritage on Strengthening the Protection of Industrial Heritage Cultural Relics can be summarized into two main aspects. First of all, the document specifies the problems on the Chinese policy on protection of industrial heritage putting forward the insufficient attention by the authorities, the unclear common ground in understanding industrial heritage as a label of the cultural legacy and the inadequate measures to protect it. As second aspect, the notice suggests the first requirements to frame out a first industrial heritage protection policy. In doing that, the document presents a correct understanding of the value and significance of industrial heritage and incorporates the industrial heritage protection into the local economic, urban and social development plan asking to local authorities to carry out the investigation, evaluation, identification, protection and utilization of industrial heritage in a step-by-step manner. Moreover, the Notice stress the importance of the protection within a wider framework which considers the public reuse of the site in an educational perspective for the society (Notice of the State Administration of Cultural Heritage on Strengthening the Protection of Industrial Heritage Cultural Relics, 2006).

Assuming an international perspective, these two documents could be seen as a

Chinese interpretation of the contemporary international charters. For instance, the definition of "industrial heritage' as proposed by the Wuxi Recommendations can be interpreted as an echo of the definition proposed by the The Nizhny Tagil Charter:

"Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural, or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education. [. . .] The historical period of principal interest extends forward from the beginning of the Industrial Revolution in the second half of the eighteenth century up to and including the present day, while also examining its earlier pre-industrial and protoindustrial roots. In addition, it draws on the study of work and working techniques encompassed by the history of technology" (TICCIH 2003, 2).

Without any doubts the definition given by The International Committee for the Conservation of Industrial Heritage refers to a western context - in understanding and defining industrial heritage- which finds its roots in the Industrial Archeology's values. As it happened for the national debate on cultural heritage and its consequential development of institutional frameworks, once again, China demonstrated a certain autonomy in developing its own scientific and institutional debate to define industrial heritage. China demonstrated to have absorbed the results of the international debate and, throughout a distillation process, to be able to elaborate its own charters and tools to coordinate the national conservation policy, maintaining an updated dialogue with the western world.

Following these two documents was then the Wuhan Recommendations product of the Symposium for the Preservation and Reuse of Urban Industrial Heritage organized by the Urban Planning Society of China in Wuhan. What emerged from the seminar was an important issue: the interconnections between industrial heritage conservation practice and its consequential economic development generated by the urban regeneration. Moreover, the symposium was also relevant because, for the first time, it revealed the necessity to adopt a national practice to list and protect industrial national heritage. It was

pointed out the need of a national survey and the will to regulate industrial heritage trough the national cultural heritage protection system (Liu et al. 2020, 503).

Another important institutional step for China was the Fifteenth TICCIH General Assembly hosted in Taipei in 2012, the first full TICCIH Congress held in Asia, a convention that saw the most Chinese participants in the history of the institution (Yu, 2013). The data on the Chinese attendance to the conference were a signal that confirmed that industrial heritage was facing an unprecedented attention in China. Moreover, as a result of the event, it was issued the first international industrial heritage document named in Asia: the Taipei Declaration on Asian Industrial Heritage (TICCIH, 2012).

According to the 2015 TICCIH Chinese national report, the Industrial Heritage Committee, in May 2014, issued the Designation *Listing Selection Guide for Chinese Industrial Heritage* a document later used by the Chinese government to dispute relevant policies on urban planning, architecture design, and creative industry operation (Liu, 2015). As stated by the preamble of the charter, "a mutual agreement to a declaration based on Asian industrial heritage to promote their conservation and preservation is appropriate and necessary" (TICCIH, 2012). The premise officially recognises the importance to switch the point of view and finally take into consideration Asian industrial heritage as a body of industrial legacy to be interpreted and protected from a specific perspective, which, sometimes could not perfectly mirror the western one. This preamble is important because it represents the international acknowledgement on the specific peculiarities of the Asian industrial heritage and the common aim to sustain the development of the local national debates.

The charter is composed by eleven articles which recognize the unicity of the Asian industrial heritage, its own historical development and the peculiarities of it architectural, technological and natural sources-related composition (Art. 3; 4; 5), the interaction with western world due to the colonization (art. 6); moreover the document emphasises the importance to adopt a flexible conservation strategy capable to preserve tangible and intangible aspects of the industrial heritage sites (art. 7; 8), while it warns that "the adaptive reuse for a new function should not be achieved at the sacrifice of the universal value and core value of the industrial heritage" (Art. 9). The charter is closed by a declaration on the need of a future cooperation between Asian countries to promote the

conservation of their industrial legacy and the acknowledgement on the necessity to establish an Asian network for industrial heritage within the framework of TICCIH (Art. 11).

The *Taipei Declaration on Asian Industrial Heritage* represents a fundamental premise which warmed up the awareness and the common understanding on industrial heritage in China, enhancing the development of a national institutional framework. Moreover, the *Taipei Declaration* helped the Chinese practice in identifying the particular values and feature's interest of the national industrialization (Liu, Lu, Wang 2020). Along with the actions brought by the Fifteenth TICCIH General Assembly, another document which had an important impact on the identification of the values of Chinese industrial heritage and represented a boost for its protection practice, was the 2015 revised edition of the *China Principles* which officially embodied the first Chinese cultural heritage operational guideline to mention industrial heritage as a new label of the heritage to be protected.³¹

As already discussed in paragraph 1.5.2 of this study, the 2015 edition of *China Principles* added two important values, cultural and social values, to the tree traditional tree ones, historic, artistic and scientific. The addition of social and cultural values enlarged the perspective to evaluate sites. The addition of these two values is remarked by Tong Mingkang, President of ICOMOS China in the foreword of the 2015 China Principles edition: "in addition to cultural and social values that are attributed to physical remains of many heritage sites, social value is demonstrated when a heritage site generates social benefits in aspects such as maintaining knowledge and spiritual continuity and enhancing social coherence, while cultural value is closely connected to cultural diversity and intangible heritage. The concepts of cultural and social values have further enriched the categories and meanings of China's cultural heritage, and have played a positive role in constructing the value based theoretical system of Chinese heritage conservation" (ICOMOS China, 2015). The revised *China Principles* represented an important turning point within the evolution of the theoretical and administrative debate in how to identify and evaluate Chinese industrial heritage, so that the commentary to the

 $^{^{31}\,\}mathrm{See}$ paragraph 1.5.2 "Revised China Principles 2015" of this study.

first article offers an important, and still in use, definition on what is considered industrial heritage in nowadays China:

"Industrial heritage specifically refers to modern and contemporary industrial structures, equipment and products that demonstrate the development of industrial work processes and technology; the significance of industrial heritage carries the same importance as other categories of heritage site. The industrial development era is an important period in China's history. Industrial heritage is a witness to this period of history. The buildings and structures at some industrial heritage sites may have also become local landmarks. Industrial heritage may have had a profound effect on the local community and culture and may have become a cultural medium with strong local character. The structures and buildings, landscape and its setting and important pieces of equipment are all components of this heritage" (ICOMOS China 2015, art. 1).

The following table [Table 2.1] shows all the institutional steps which brought China to define a common ground and understanding in identifying its industrial legacy. All the documents issued by different national departments and the international charters joined by China mirror the ongoing debate which was taking place at a scientific and academic level starting from the late nineties.

This table [Table 2.1] not only summarize the theoretical path made by the country in dealing with its industrial legacy, but it also gives an immediate picture of the institutional framework which preceded the issuing of specific legal tools adopted by the country to list, protect and reuse its industrial legacy.

HISTORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTEMI ORART TRA

Table 2.1 Table which summarizes the institutional steps made by China to define industrial heritage as a new label of the national heritage to be protected. (Source by the author)

Year	Issuing Department or institution	Document / events
2006	State Administration of Cultural Heritage	Wuxi Recommendations
2006	State Administration of Cultural Heritage	Notice on Strengthening the Protection of Industrial Heritage
2010	China Urban Planning Society	Wuhan Recommendations
2010	Industrial Architectural Heritage Academic Committee	Beijing Initiative
2012	China Industrial Heritage Protection Seminar	Hangzhou Consensus
2012	The International Committee for the Conservation of Industrial Heritage (TICCIH)	Taipei Declaration on Asian Industrial Heritage
2013	National Committee of the Chinese People's Political Consultative Conference	Suggestions on Strengthening the Protection and Reasonable Utilization of Industrial Heritage
2013	China Historical and Cultural Cities Committee	Industrial Heritage Protection and Utilization of Hangzhou State Consensus
2014	State Administration of Cultural Heritage	"Guidelines for the Protection and Utilization of Industrial Heritage (Comments Soliciting Edition)"
2014	Industrial Heritage Committee of Chinese Society of Cultural Heritage	"Guidelines for the Evaluation of China's Industrial Heritage Value (Trial)" (co-sponsored)
2015	ICOMOS China + State Administration of Cultural Heritage	The Principles for the conservation of Heritage in China. Revised edition

2.4 Legal regime on protection and management of industrial heritage in China. Premises and practice

2.4.1 The evolution of the ideological and political framework on industrial heritage

If from one side, China arrived to define the values though which identify its industrial heritage, on the other side the Country needed to release a national practice to protect and manage its. As stated by Lu, Liu and Wang (2020), the idea of a what is industrial heritage and how it is significant for conservation were defined at both theoretical and practical levels, finding a national best practice rather than simply adopting international charters and rules.

In fact, the development of the theoretical debate in China is strictly intertwined with the responses of the governmental authorities which, year by year, issued a series of documents trying to translate the theory into a national practice. This paragraph aims to reproduce the path made by Chinese central authorities in regulating the field of industrial heritage. This part of the study will take into consideration different documents issued by central governmental departments which have some relevance within the promotion of a national best practice. Before to proceed it is very important to specify that, whether the industrial heritage has been recognized by regulations as part of the national heritage, it is not subjected to the same legal regime of the Cultural Heritage³², so it is not regulated by the 1982 *Cultural Relics Protection Law*, neither its jurisdiction belongs exclusively to the State Administration of Cultural Relics and to its pyramidal administrational system.

As already noticed by other authors (Guo et al. 2016; Lu et al. 2020), while the cultural heritage conservation system- through its legal and administrative regime- have contributed to the nomination and management of domestic industrial heritage even later than 2006, starting from late 2017 things started to change. Since 2018 China adopted a different policy to manage its industrial heritage, a system which refers to different ministries and departments with respect to the cultural heritage's policy regime.

In order to better understand how the administrative system for industrial heritage

139

³² See chapter 1, paragraph 1.6. "Current status of cultural heritage legal and administrative system in China" of this study.

HISTORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTEMPORARY PRAI

sites works, it's significant to resume the institutional path made by different governmental departments in issuing documents to establish a new industrial heritage legal conservation system [Table 2.2].

Table 2.2 This table resumes the institutional path made by different governmental departments in issuing documents to establish a new industrial heritage legal conservation system.

(Source by the author)

Year	Issuing Department	Document
2014	State Council	Guiding opinions on promoting the relocation and transformation of old industrial zone in urban areas
2015	State Council	Made in China 2025
2016	Ministry of Industry and Information Technology	Guiding opinion on promoting the development of industrial culture
2016	Ministry of Industry and Information Technology	Guiding Opinions on strengthening the development of Industrial heritage
2017	CCPC + State Council	Opinions on implementation of the inheritance and development project of Chinese excellent culture
2017	Ministry of Industry and Information Technology	List of the first batch of national industrial heritage
2018	Ministry of Industry and Information Technology	Interim Measures for the Administration of National Industrial Heritage
2018	Ministry of Industry and Information Technology	List of the second batch of national industrial heritage
2019	Ministry of Industry and Information Technology	List of the third batch of national industrial heritage
2020	Ministry of Industry and Information Technology	List of the forth batch of national industrial heritage

To promote the protection and utilization of industrial heritage and to establish a national scientific and standardized practice, in 2018 the Ministry of Industry and Information Technology formulated the *Interim Measures for the Management of National Industrial Heritage*. This set of rules represents the first effective legal tool adopted by China to regulate the identification and protection of industrial heritage nationwide. The Interim Measures embodies the results of years of governmental debate and projects launched from different central departments which tried to prepare a common legal ground to regulate the field of the national industrial heritage.

In order to better understand the importance and the significance of the *Interim Measures* it is important, first, to analyze the documents issued before the Measure's promulgation and recreate the framework of policies which preceded it. The article 1 of the *Interim Measures* offers a general background of official governmental notices which represented the preamble (Interim Measures for the Management of National Industrial Heritage, 2018). The article 1 mentions about tree documents: the *guiding opinions on promoting the relocation and transformation of old industrial zones in urban area*, promulgated by the State Council in March 2014; the *Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture* issued by of the General Office of the Central Committee of the Communist Party and the State Council on January 25th 2017; the *Guiding Opinions on promoting the development of Industrial culture*, proclaimed on December 30th 2016 by the Ministry of Industry and Information Technology. All these official notices represent the general legal framework which gave birth to the 2018 national policy.

2.4.2 The guiding opinions on promoting the relocation and transformation of old industrial zones in urban area

As mentioned in paragraph 2.1. "Industrialization and Reform Era. Some premises to understand Chinese industrial remains", in the first decade of the XXI century the Chinese local government had to deal with an unprecedent and rampant urbanization. Paraphrasing Hsing (2006), land became one of the main vehicles for the local states to strengthen their authority and to consolidate the local administrative budget. After many local tentative actions to deal with the problems of the increasing pollution of the urban

air, the relocation of the production and the discarded industrial plant occupying portion of urban area, in 2014 the central government issued a first national guideline to regulate the relocation of the industrial production away from the urban zones, promoting the renovation of the dismissed plant within an urban regeneration program.

The document is divided into four chapter: 1- Understanding the importance of the relocation and transformation; 2- General requirements; 3- Main tasks; 4- Safeguard measures.

After a general introduction declaring the importance of production's relocation of the old industrial plant and presenting the list of the social and economic benefits related to it, the notice follows up with the guiding ideology which framed out the document and the basic principles to follow. What is interesting to the extent of this study is the third chapter. Among the main objectives of the governmental program, the point 4 "Cultivate and develop new industries" which promotes the expansion of the so later called "creative industries". This is one of the first time when the concepts of industrial heritage and creative cultures are mentioned together within the same official document, a preamble on what will be later considered a strong binomial in the practice of industrial heritage and urban regeneration.

For the extent of this study, the Art. 8 is surely the most important of the document and, it is believable, that it represents the reason why the *Interim Measures* mentions the document among its premise. The point 8, in fact, invites to "strengthen the protection and reuse of industrial heritage in order to promote the importance of the historical values which it represents and regard the protection and reuse of the industrial heritage as an important part of the relocation and transformation". Moreover, the second part of the art. 8 promotes a comprehensive inspection and identification of the industrial heritage buildings to be protected before to proceed with the implementation of the relocation and transformation program, recommending to follow a strict protection policy" (Guiding opinions on promoting the relocation and transformation of old industrial zones in urban area, 2014).

Attached to the document, there is an interesting table [Table 2.3] which complete the contents of the notice presenting a precise organization of tasks and responsibilities. Again, what is interesting to observe is the attention given to the industrial heritage site's

TORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTENTORART FRATE

identification, protection and management practice which, at this stage of the discourse, it is still under the jurisdiction of the Bureau of Cultural Relics.

To the extent of a more comprehensive contextualization of the development of the Chinese practice in protecting and managing industrial heritage and to better comprehend all the government's departments involved, see the below table [Table 2.3].

Important to be noted is the involvement of the public funds (see point 5 of the table) and of the national banks to support the relocation program with specific loans (points 11 and 10) along with the commitment of the Ministry of the Land Use to endorse a better use of land resources.

Table 2.3 Annex table to the "The guiding opinions on promoting the relocation and transformation of old industrial zones in urban area" document containing the key tasks department division. (Translation by the author).

Serial number	Tasks	Responsible Department
1	If the functions and land use types of the old industrial area in the urban area have undergone major changes due to the implementation of relocation and reconstruction, the people's government of the city where they are located shall organize the revision of relevant plans in accordance with the law, and the relevant departments shall promptly follow the procedures.	Ministry of Housing and Urban-Rural Development, Ministry of Land and Resources.
2	For projects that are in line with the direction of industrial upgrading, especially the simultaneous implementation of mergers and reorganizations and the reduction of excess capacity, the relevant departments shall speed up the relevant procedures in accordance with laws and regulations.	National Development and Reform Commission, Ministry of Industry and Information Technology.
3	Qualified relocation and transformation enterprises that eliminate outdated production capacity shall be supported in accordance with the central government's measures for the management of incentive funds for eliminating outdated production capacity	Ministry of Finance, Ministry of Industry and Information Technology, Development and Reform Commission, Energy Bureau.
4	Support qualified parks to carry out circular transformation	Development and Reform Commission.

5	The central government's special funds for the prevention and control of heavy metal pollution actively support the treatment of polluted land in urban old industrial areas listed in the "Twelfth Five-Year Plan for the Comprehensive Prevention and Control of Heavy Metal Pollution".	Ministry of Finance, Ministry of Environmental Protection.
	Increase capital investment in the treatment of organic pollution from the evacuated land.	
6	Integrate the relocation and transformation of old industrial areas in urban areas with speeding up the transformation of shanty towns, and vigorously promote the transformation of old industrial areas in urban areas.	Ministry of Housing and Urban-Rural Development, Development and Reform Commission, Ministry of Finance, State-owned Assets Supervision and Administration Commission
7	Support the timely announcement of important industrial heritage as cultural relics protection units of the corresponding level.	Bureau of Cultural Relics
8	Continue to organize the pilot work for the relocation and transformation of old industrial areas in the urban area, which was launched in 2013. Continue to arrange special funds for the relocation and transformation of old industrial areas in the city	Development and Reform Commission
9	The State-owned Assets Supervision and Administration Department shall coordinate relevant state-owned enterprises to actively cooperate with the relocation and transformation of old industrial areas in urban areas	State Administration of Cultural Heritage
10	Support to use the operating service income and accounts receivable of the relocated enterprises that meet the requirements in the old industrial zone of the urban area as basic assets to carry out asset securitization.	Securities Regulatory Commission
11	Support the use of loans for relocation and renovation projects in old industrial areas in urban areas as basic assets and carry out credit asset securitization.	People's Bank of China, China Banking Regulatory Commission
12	Support eligible companies to raise funds through the issuance of corporate bonds, medium-term notes and short-term financing bonds for the relocation and reconstruction of old industrial areas in urban areas	Development and Reform Commission, People's Bank
13	When arranging special funds for industrial	Development and Reform

CHAPTER 2 REPRODUCING THE DISCOURSE ON INDUSTRIAL HERITAGE IN CHINA: HISTORICAL EVOLUTION, LEGISLATIVE REGULATION AND CONTEMPORARY PRATICE

	development, municipal infrastructure and public service facilities, pollution control, and other special funds, relevant departments of the State Council must strengthen coordination and work together to support the relocation and transformation of old industrial areas in urban areas	Commission, Ministry of Finance, Ministry of Industry and Information Technology, Ministry of Environmental Protection, Ministry of Housing and Urban-Rural Development, etc.
14	Appropriate arrangements for central and local state-owned capital operating budget funds to support the transformation of state-owned enterprise shanty towns in the relocation and transformation of old industrial areas in urban areas.	Ministry of Finance, State Administration of Cultural Heritage
15	When land and resources management departments at all levels issue annual new construction land plan targets, they must tilt the relocation enterprises based on the scale and time sequence determined by the implementation plan. If the relocation of a centrally-owned enterprise	Ministry of Land and Resources
	requires a large amount of one-time land use, and the local government is indeed unable to balance the solution, it can be reported to the relevant department to study and solve the problem when arranging the land use plan indicators for the next year.	
16	Include the designated municipal districts for the relocation and reconstruction of old industrial areas in urban areas into the scope of the pilot redevelopment of low-utility land in cities and towns.	Ministry of Land and Resources

2.4.3 Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture

This is the first time in which a central government document has the Chinese traditional culture as main objective. The Opinions have to be inserted among the ideology emerged during the 18th National Congress of the Communist Party of China³³ and later on enhanced in the ideology emerged in the 19th National Congress³⁴. In both the National Congresses a focus was put forward on the promotion of the national traditional culture in order to strength the Chinese cultural soft power. The Art. 1 of the document says: "since the 18th National Congress of the Communist Party of China, under the leadership of the Party Central Committee with Comrade Xi Jinping at its core, party committees and governments at all levels have been more conscious and proactive in promoting the inheritance and development of Chinese excellent traditional culture, and carried out a series of innovative and fruitful work. It has effectively enhanced the cohesion, influence and creativity of the excellent Chinese traditional culture. At the same time, it should be noted that with the profound economic and social changes in our country, the increasing opening up to the outside world, the rapid development of Internet technology and new media, various ideological and cultural exchanges and confrontations have become more frequent, and there is an urgent need to deepen the understanding of the importance of the excellent Chinese traditional culture".

The document is composed by 18 articles, structured in four main chapters (1. Significance and overall requirements; 2. Main content; 3. Key tasks; 4. Organization, implementation and safeguard measures), it offers a national guideline to promote a strengthening on developing projects which aim to encourage the valorization of Chinese traditional culture. Within an overall objective which will be later expressed by Made in China 2025 program³⁵, this document aims to give a clear message to the Nation and to

³³ It was held between November 9 and 23, 2012

³⁴ It was held between October 8 and 24, 2017

³⁵ "Made in China 2025" is a strategic industrial and economical plan and policy promoted by the Chinese Communist Party to develop the manufacturing sector of the People's Republic of China, issued by Premier's cabinet in May 2015. The program aims to remove from the Country the label "world's factory" in order to don't be considered anymore as the country producer of cheap goods, but instead to upgrade the manufacturing capabilities of Chinese industries, growing from labor-intensive workshops into a more technology-intensive powerhouse.

the world: China doesn't want to be considered any more the manufacturer of the globe, but, thanks to the valorization of its ancient traditions, China will be able to redeem its role. Significant are the concepts expressed by art. 4: "By 2025, the inheritance and development system of Chinese excellent traditional culture will be basically formed. Research and analysis, education, protection and management of cultural heritage, innovation and development, communication and other aspects have been coordinated to promote and achieve important results. Cultural products with Chinese characteristics and Chinese style will be considered more important. The Chinese cultural awareness and the cultural self-confidence have to be significantly enhanced as the foundation of the Country's cultural soft power has to become more solid so the international influence of Chinese culture has to increased significantly." Although the program has been drastically de-emphasized in government and other official communications, it is economically and politically still in vigor and these concepts could be considered a kind of ideological preamble to it. Made in China 2025 and the Opinions on the Implementation of the *Inheritance and Development Project of Chinese Excellent Traditional Culture* are strictly interconnected and are worthy to be mentioned together because they both contribute to strength the ideological framework, the scientific debate and the social consensus regarding the latest national policy concerning industrial heritage³⁶.

Among all, what it really matters about the *Opinions* document is the Art. 10 which directly refers to industrial heritage as an important category of the Chinese cultural heritage which must be protected and valorized. This task is considered a primarily important national duty in order to respond to the *Opinions* ideology through proactive actions.

³⁶ This assumption will be later demonstrated by the analysis of the document *Guiding Opinions on promoting the development of Industrial culture* which has a strong reference to Made in China 2025 program.

2.4.4 Guiding Opinions on promoting the development of Industrial culture

On December 30th 2016, the Ministry of Industry and Information Technology issued the *Guiding Opinions on Promoting the Development of Industrial Culture*. The document was issued just one month before the *Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture* and it can be considered as part of the same ideological framework. What really makes this document important is not only the fact that has to be considered the premise to the Interim Measures for the protection of Chinese Industrial Heritage. It can be said that this text prepared the ground for the upcoming policies regarding industrial heritage and it represents the conjunction ring between the first phase of the debate spread out after the 2006 *Wuxi Recommendations* and the National Industrial Heritage lists published since 2017 onwards.

The Opinions are introduced by an eloquent premise which explicitly places the document within the theoretical and political framework described before: "Industry is the foundation of a strong country, and culture is the soul of a nation. Industrial culture is the sum of material culture, institutional culture, and spiritual culture formed along with the process of industrialization and permeated into industrial development. It has a fundamental, long-term, and critical impact on promoting the transformation of industry from large to strong. In order to implement "Made in China 2025" and accelerate the development of industrial culture, the following opinions are hereby put forward".

The Art. 1 reinforced what declared by the premise amplifying the ideological meaning: "At present, China has become the world's largest manufacturing country, but the problem of a large but not strong industrial system is still prominent. [...] To vigorously develop industrial culture is an important means to enhance the comprehensive competitiveness of China's industry, a strategic choice to shape a new image of China's industry and a strong support which can contribute to switch from Chinese manufacturing into a Chinese creation".

The industrial culture, translated from the original Chinese expression "工业文化"is the key concept in this document and it is strongly related to the theoretical basis of *Made in China 2025* program. It enshrines many concepts and connotations; the broader

definition of industrial culture, as proposed by the *Opinions's* interpretation document, is "the sum of material culture, institutional culture and spiritual culture which aims to promote the development of industrial culture from the point of view of the production, the institutions and the general spiritual level, so as to better play a flexible role to support the development and the growth of the national manufacturing"³⁷. It has been theorized by Wang Xinzhe, Sun Xing, and Luo Min, the authors of "Industrial Culture" a book published by Electronics Industry Press in 2018. This book is a multidisciplinary framework which explains the basic theory of industrial culture combining the context of the industrial architecture, the context of the history of national industrial evolution, the functional values arriving to formulate a strong theoretical ground to support the concepts of the need to enhance the national industrial soft power, industrial spirit, the national industrial and cultural resources in order to shape a new industrial image of the country.

Going back to the *Opinions*, the document is articulated into four chapters: 1. understanding of the strategic significance of the development of industrial culture; 2. Requirements; 3. main tasks; 4. safeguard measures.

Again the Art. 1 of the "Requirements" section emphasizes the ideological background where to position the understanding of the entire document: "The guiding ideology of this document fully implements the spirit of the 18th National Congress of the Communist Party of China [...] and firmly promote innovation, coordination, greenness, openness, and Shared development concepts; it practice socialist core values, and promote the implementation of "Made in China 2025" as the main ideological line; vigorously promote the Chinese industrial spirit, consolidate the foundation for the development of industrial culture, continuously promote the expansion of the industrial cultural industry, cultivate industrial culture with Chinese characteristics, improve the national industrial image and promote its transformation". Another important concept emerging from this article is the "industrial spirit", translated from the Chinese "工业精神". According to Lu Feng³8 (2020), the concept of industrial spirit has to be intended as

³⁷ See the document "Interpretation" attached to the Guiding Opinions on promoting the development of Industrial culture, 2016.

³⁸ Lu Feng is full professor at the School of Government, Peking University.

related to the belief in the principle of "independence and self-reliance" in technological and industrial development. The roots of this idea have to be found at the foundation of the People's Republic of China, when the foreign capital controlled about 42% of China's industrial assets³⁹. So, as sustained by the author, the Chinese industrial spirit originated from the structural contradictions faced by the early economic development of the People's Republic of China. On the one hand, the new country had to develop its poor economy; on the other hand, China had to fight to remain politically and economically independent. However, if China's development is red within an historiographical perspective, there may be contradictions and different relationships between these two elements: due to the different stages of the national history, have affected the rise, decline, and recovery of China's industrial spirit (Lu, 2020). So, what the Art. 1 wants to affirm, and, - in a wider perspective- the entire document says, is the aim to build a different image for the national industrial system through programs which enhance the industrial culture and the industrial spirit. So that, Art. 2 of the *Opinions* remarks the need to adhere to the inheritance and to the innovation of the industrial culture. It means that to build a new image of the Chinese industrial power historical traditions and technological innovations are both required. And, it continues, in order to "consolidate the social consensus for the development of industrial culture [...] it is necessary to focus on outstanding issues such as: industrial design, industrial heritage, industrial tourism, quality branding and other field to form a new competitive country." The concepts are furtherly emphasized by Art. 3 which says: "The main goal is to inherit and cultivate the industrial spirit with Chinese characteristics, establish a new concept of industrial development [...] In the last 5-10 years, a number of great craftsmen and excellent enterprises have emerged that embody the spirit of the times; the cultural elements of industrial products have been fully demonstrated, and the industrial culture has become a new highlight of economic growth; the quality connotation and reputation of Made in

³⁹ At that time, foreign-funded enterprises produced more than 60% of China's coal, 86% of iron, 88% of steel, and 76% of power generation; even in China's most powerful industry of national capital—cotton textiles In the industry, foreign companies also own 54% of the spindles and 44% of the looms; foreign capital also controls more than half of the output of China's shipbuilding industry and various light industries (including wood processing, leather, cigarettes and beverages), and 73% of the ships. Tonnage and most of the public utilities; China's banking, insurance, and foreign trade are even more dominated by foreign capital. However, not only was China still a poor and backward agricultural country at that time, but it was also quickly invaded by Japan (Lu Feng, 2020).

China have been significantly improved".

For what concerns the topic of this study, industrial heritage is specifically mentioned among the "Main tasks" chapter. After advocating the rejuvenation of the Country trough industry, the Art. 2 of the third section encourages scientific research to support a theoretical framework supporting the role of the industrial culture. Industrial heritage is considered one of the fields to be imported in order to achieve the main goal. The article encourages to improve policies to support the development of a national industrial heritage's system, along with the enhancement of the national industrial heritage tourism. These points are furtherly discussed in Art. 3 which is almost totally dedicated to industrial heritage issue. It explicitly promotes the protection and utilization of industrial heritage trough the creation of a national practice. So that the article promotes "to carry out investigations in order to establish industrial heritage lists and a hierarchical protection mechanism; to protect a batch of national industrial heritage, and to rescue endangered industrial cultural resources. To guide social capital into the field of industrial heritage protection, rationally developing and utilizing industrial remains and encouraging qualified areas to use old factories' remains to build industrial museums in accordance with the law". This point enshrines in an official notice what later will become the very core of the national practice: Interim Measures for the Protection of national Industrial heritage. Moreover, the same Art. 3 continues in combining the enhancement of the industrial heritage national protection practice along with the need to develop industrial tourism trough the creation of creative parks. In this way, it continues the article, new form of industrial cultures will be supported, strengthening, at the same time, the reuse of its past. Again, the protection of industrial heritage and its management are combined as an indivisible binomial.

The fourth chapter of the document is important for two reasons: it indicates the institution in charge of the field of industrial heritage protection which is the Ministry of Industry and Information Technology at all its administrative levels, fostering diversified investments and financing mechanism even towards government-private partnership, and it strongly promotes academic and scientific research to support the theoretical framework to shape a new image of national industry.

With regard to this last issue, the latest academic activity in terms of papers confirmed

the scientific involvement to the national policy. According to the research conducted by Gao and Chang (2017), on the Chinese database CKNI, the number of domestic scientific papers and funded researches related to the field of industrial heritage increased vividly starting from 2015, maybe, as a consequence of the launch of "Made in China 2025" program and as the demand of reuse of industrial heritage heats up the quantity and quality of the related researches.

To conclude, the *Guiding Opinions on promoting the development of Industrial* culture clearly states that the development of the industrial culture will represent an engine for the economic growth.

2.5 A national policy: Interim Measures for the Administration of National Industrial Heritage

In order to promote the protection and utilization of industrial heritage and establish a scientific and standardized national industrial heritage protection and management system, the Ministry of Industry and Information Technology organized and formulated the *Interim Measures for the Administration of National Industrial Heritage*. The promulgation of the Interim Measures represents a key measure which implemented the concepts enshrined in the *Guiding Opinions* and regulates the identification and protection of industrial heritage in China. Moreover, the document embodies an unprecedent policy for effectively guiding the protection and utilization of industrial heritage nationwide.

To open the document is an explicit statement which clearly place the Interim Measure within a specific ideological and political background, so that Art. 1 declare that the *Interim Measures* finds its roots in three different documents: the *Guiding opinions on promoting the relocation and transformation of old industrial zones in urban area*, the *Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture* and the Guiding Opinions on promoting the development of Industrial culture.

The document is composed by 28 articles organized in six chapters: 1. General Provisions; 2. Procedure; 3. Protection and management; 4. Use; 5. Supervision and Inspection; 6. Supplementary Provisions.

The chapter one, after introducing the general ideological background of the document, at its third point it offers a precise definition of what is considered as industrial heritage: "the term National Industrial Heritage mentioned in these Measures refers to the industrial relics that are formed during the long-term development of China's industrial history which have high historical, technological, social, and artistic value and are recognized by the Ministry of Industry and Information Technology". Here is finally agreed an official meaning of the term "Industrial Heritage" and a common understanding of the values. This article is very important since it enshrines years of scientific and political debate on the values which have to be taken as references to identify the national industrial legacy. This confirms that the that the theoretical debate on Chinese industrial heritage is an "active process of interpretation", as stated by Lu, Liu and Wang (2020) in their contribution, which values' evolution is shaped by the real-life conservation practice. It can be stated the general debate on cultural heritage, generated by the scientific community and boosted by the two China Principles editions, represented an important stage where to discuss about values. It is important to remember that social value was added for the first time as cultural heritage values only in 2015 China Principles edition as consequence of a very animated debate among politicians and cultural heritage professionals. If social value would have never been recognized as cultural heritage values, it would have been very difficult to image the evolution of the academic and political discourse on Chinese industrial heritage protection. Based on that principles, the Art. 7 better explains the characteristics of an industrial heritage site: "1. The site presents an iconic significance for the Chinese history or industrial history. It has contributed to the very beginning of the industry in the world or in China; it has an important influence within the Chinese history or to the world history; it is closely related to Chinese social changes or important historical events. 2. The site presents important changes in the history of the national industrial production, reflecting technological innovations or discoveries having an important impact on subsequent technological development; 3. The site presents a rich industrial-culture connotations, has a strong influence on the socioeconomic and cultural development at that time, it reflects the social outlook of the same period and it is widely recognized by the public; 4. It presents architectural characteristics in its design or in its engineering which are representatives of specific historical periods

or has an important impact on industrial aesthetics; 5. the site presents good foundation for protection and utilization plan".

The fourth chapter is dedicated to regulate the use and the management of the industrial site, giving precise guidelines to enhance the industrial heritage reuse. The role of the local community and the importance of the academic research are pointed out by art. 18 which recommends that the "the use of national industrial heritage shall meet the requirements of the heritage protection and utilization planning, fully listen to the opinions of the public and respect scientific decisions in order to maintain the overall style and the inherited industrial culture". The document continues on the importance to enhance the reuse of the site to "promote the prosperity and the development of industrial culture" (art. 19) and to support qualified project such as the opening of industrial museums, industrial cultural parks and related facilities (art. 20) in order to promote the development of industrial tourism (art. 21). This fourth section of the document is closed by an important article which reclaims the necessity to strength the academic research to investigate on the national industrial heritage and ion the importance to train professional figures to support the development of the protection and management project (Art. 23).

For what concern the responsibilities of the protection of the industrial site, the Art. 4 goes directly on the practical ground, focusing on the role of primarily importance played by the site owner: "In order to carry out the protection and utilization of national industrial heritage, the main role of heritage's owner should be brought into play and it should be adhered to the principles of government guidance, social participation, protection priority, rational use, dynamic inheritance and sustainable development". The role of the owner is better explicated in later articles (8; 9; 11; 12; 14; 15; 17). The *Interim Measures* stipulates that the owner of a national industrial heritage should assume the main responsibility for strengthening the protection of the national industrial heritage. He is invited to submit the application to the local Ministry of Industry and Information Technology's representatives to suggest the nomination of his site (Art. 8). The application should contain the following documents and materials: proof of estate property rights, pictures, drawings, files, and video data; Management systems and measures which the owner intends to adopt; the protection and reuse plan and the documents and materials that can prove the value of the heritage. Once received the

approval from the Ministry of Industry and Information Technology, in accordance with the traditional practice on cultural heritage which dates back to its very beginning, the owner should set up a plaque to certificate the general information on the industrial heritage (Art. 11), such as: the name of the heritage site, the mark, the name of the certification body, the time of certification and related instructions. In order to promote the reuse and utilization of the industrial heritage he is invited to organize cultural events, exhibition and other facilities to promote the valorization of the site's values (Art. 12). Moreover, the owner should set up a special department or a person to monitor the status of the heritage preservation, to delineate the scope of the protection, to maintain the heritage site in its original condition, its style and characteristics and to adopt effective measures to protect and valorize it through an effective management (Art. 14). In accordance with the traditional cultural heritage practice, the owner is also required to establish an archive to record the actuation of a correct protection plan (Art. 15) and, as last requirement, the owner is also asked to submit an annual report on the protection and utilization of the heritage site to the provincial level of the Ministry of Industry and Information Technology (Art. 17).

If these are the responsibilities of the owner, the *Interim Measures* are also clear in defining the duty of the public authorities, represented by the different administrative levels of the Ministry of Industry and Information Technology (art. 5; 8; 13; 15; 17; 24; 25; 27; 28).

The Art. 5 frames out the main responsibilities of the Ministry of Industry and Information Technology: "The Ministry of Industry and Information Technology shall be responsible for the national industrial heritage identification process, protection and management. It is asked to supervise and manage the entire process and to guide the local enterprises in the protection and utilization of industrial heritage. Provincial-level Industry and Information Technology authorities and the headquarters of central enterprises are responsible for the organization, declaration and recommendation of national industrial heritage within their own administrative areas".

If the art. 8 specifies that the submission of the application is a duty of the owner, from the other side it requires to the three administrative levels of Ministry of Industry and Information Technology to superintend the process. The local level receives the

application and get a first feedback which has to be secondly confirmed by the regional administrative level. After an on-site verification by the authorities and after the review of the central level of the ministry, the site will be published as part of the National industrial heritage list (Art. 10).

Within the third document's chapter regarding the "Protection and Management" of the site, the Art. 13 encourages the local and the provincial level of the Ministry to consider the industrial heritage belonging to their jurisdiction among their urban and economic plans in order to support the protection and valorization of the site trough special funds. Moreover, the Ministry is also responsible to collect all the site's archives and organize them within a national industrial heritage database (Art. 15) and it is in charge to check the site's annual reports (Art. 17).

The fifth chapter of the *Interim Measures* is totally dedicated to the supervision's duties which the Ministry of Industry and Information Technology is asked to respond to. The Art. 24 reinforces what already mentioned in previous points of the document: it insists in attributing to the ministerial authorities the duty to supervise the entire industrial heritage protection process and in organizing inspections and evaluations. If some site's structures are not responding to *Interim Measure*'s requirements or if the site presents some damages which cannot be repaired the Ministry has the power to remove the site from the national Heritage lists (Art. 25-26). To conclude, the document dedicated the last chapter "Supplementary Provisions" to reiterate that Provincial-level industry and informatization Technology ministry representatives should organize the identification and the management of the provincial-level industrial heritage in light of the actual conditions of their region (Art. 27). To close the document, the last article declares that the Ministry is responsible for the interpretation and implementation of the *Interim Measures*.

2.6 An insight on Chinese industrial heritage. Interview to Professor Liu Boying

Liu Boying is a professor of School of Architecture in Tsinghua University, he is also Chairman of the Industrial Heritage Committee under Cultural Relic Academy China.

Being a one of the most important scholars and one of the first professional figures in China working on industrial heritage, his personal experience and involvement in both the academic and scientific development of the Chinese practice represent a witness of the path made by China. His insights embody the intertwining dialogue which had occurred over the years between academic, scientific and professional figures with the governmental agencies in finding a best standardized practice to protect and reuse the industrial legacy. The complete interview is transcribed in APPENDIX IV of this study.

In tracing the begetting of the discourse, Liu Boying started to be involved in the industrial heritage field in 2004 after he participated to the International Urban Design Competition based on Chengdu Seamless Steel Pipe Factory relocation. Although at the beginning of 2000 some industrial reuse projects started to appear (such as Shuang'an shopping malls renovated by Beijing Watch Factory and artist studios set up in Beijing 798 since 2002), these examples only played the role of sporadic architectural experimentations of industrial space reuse, they did not have been properly treated as industrial heritage sites on behalf of the professionals and on the basis of a shared understanding of heritage values. At that stage, industrial heritage in China had not been precisely defined yet and there was not a common understanding on this new label of the heritage. As remarked by prof. Liu, the beginning of the protection of industrial heritage in China can be recognized with the 2006 Wuxi Forum and the adoption of the *Wuxi Proposal* by the State Administration of Cultural Heritage.

In the mid-1980's, after China's reform and opening up, industrial enterprises started to relocate from the central area of the city. In the 1990's, with the economic development and the rapid urbanization, the contradictions between industry and urban life became more and more prominent, factors which furtherly promoted the relocation of industrial enterprises out from the city center. In the national scenario, among the local governments, Beijing was one of the first municipalities to issue in early nineties (1993) a specific policy for the relocation of industrial enterprises, focused on solving the problems related

to pollution in central urban zones. Beijing CBD was developed in the former Eastern Suburbs Industrial Zone after the relocation of many industrial enterprises, among which are worthy to mention the No. 1 Machine Tool Factory, the No. 2 Printing and Dyeing Factory, the Snowflake Refrigerator Factory and the Beijing Jeep Depot.

After the 2000's, with the rapid development of urban growth and the rampant expansion the real estate, the industrial enterprises originally located in central areas of the city were slowly forced to move to suburb areas or to smaller towns far away from the mega city's cores. Due to the lack of a shared awareness on the industrial heritage identity and values and, in order to respond to the real estate development, many discarded plants were demolished. Despite the discourse on industrial heritage was still immature, the *Wuxi Proposal* adopted by the Wuxi Forum in 2006 had a great impact and started to obtain the first results: in the third census of cultural relics and during the selection of the Seventh Batch of National Key Cultural Relics Protection Units, the protection of industrial heritage started to emerge; but we have to wait the approval of the *National Old Industrial Base Adjustment and Reconstruction Plan (2013-2022)* issued in 2013 by the National Development and Reform Commission and approved by the State Council, to start to see a national answer to the contradiction between enterprises 'relocation and urban growth.

In the long path made by Chinese institution to spread a social awareness, a common understanding and a national standardized practice on industrial heritage, it is important to look at the contribution of academic and scientific communities.

In 2010, the Architectural Society of China established the Industrial Heritage Academic Committee, which is the first academic organization on industrial heritage in China. In 2013, the Industrial Heritage Department of the Chinese Historical and Cultural Cities Committee was established, while the following year, in 2014, the Industrial Heritage Committee of the Chinese Cultural Relics Society was founded. In explaining the prominent role played by academic and scientific organizations, prof. Liu Boying remarked: "The annual academic conference has been held for 11 sessions so far, and a collection of papers has been published in each session. We have formulated the *China Industrial Heritage Survey Index* and *China's Industrial Heritage Value Evaluation Guidelines*, and integrated the national key cultural relics protection units list with the

industrial heritage sites selected by the survey. Interdisciplinary research teams in the fields of urban planning, architecture, technology history, environmental protection, museums, have been established, and government management departments, industrial enterprise leaders, and cultural and creative park operating agencies have also participated".

Over the years, thanks to the operation of the scientific communities, an academic system for the identification, research, protection and utilization of China's industrial heritage has been established; the system and the knowledge produced by the academic and scientific communities helped to complete tasks of government management departments, it participated in the formulation of relevant policies and it contributed to spread the knowledge of industrial heritage. A large number of scholars have participated, to the development of a national practice working with the government and training a large number of new professionals. Planners and architects in academic organizations are directly involved in the protection and utilization of industrial heritage in China. It can be said that, if on one side the government acts though a top down action to the establishment of a national practice, on the other hand, the scientific community supports and cooperates with the government though a bottom up work. While the role the government mainly guides the protection and utilization of industrial heritage by promulgating documents, experts and scholars belonging to academic and scientific institutions provide advices to the government and participate to the development of official documents. Specifically, on the mutual cooperation between the scientific community and the role of the government, Prof. Liu Boying stated that: "the representatives of China's "People's Congress" and "CPPCC" have put forward proposals for the protection and utilization of industrial heritage many times, including Shougang and Beijing Coking Plant. This is the voice of the people which come from a very the bottom up practice. On the other hand, it is also very important to establish a standardized industrial heritage protection practice trough a top down strategy, to put the basis of the management system at the national level. The main role of academic and scientific groups is to advise the government, to influence and participate to the formulation of policies and to spread awareness and a common understanding on the industrial heritage's value".

The industrial heritage protection practice in China is a fragmented and

multigovernmental layered system. Given the prominent role of the Ministry of Industry and Information Technology, there are other governmental agencies which are taking part to the process. While for the cultural heritage there is a very clear structure which stays under the control of the State Administration of Cultural Heritage, the industrial legacy is managed by a multilayered system related to different ministries. In trying to clarify this point Prof. Liu Boying reported: "the Natural Resources Department already announced 88 national mine parks listed into four batches; the State-owned Assets Supervision and Administration Commission has already released 11 lists of state-owned enterprises labelled as industrial heritage sites composed by nuclear plants, steel industries lists, information and communication enterprises, petrochemical industries and machinery and manufacturing plants. The National Tourism Administration issued the "National Industrial Tourism Development Outline" to promote the industrial culture, to enhance the reuse of industrial heritage sites and to implement the "Ten Hundred Thousand" project of industrial tourism" which forseen 10 industrial tourism cities, 100 industrial tourism bases and 1,000 national industrial tourism demonstration sites. At the end of 2017, 10 national industrial heritage tourism bases were released. In the latest years, in The State Administration of Cultural Heritage published the Notice on Strengthening the Protection of Industrial Heritage" Cultural Heritage Baofa [2016] No. 10, promulgating the Guidelines for the Protection and Utilization of Industrial Heritage (Draft for Comment), and compiled the Specifications for the Protection and Utilization of Cultural Heritage Industrial Heritage (WW\T0091 -2018) / Industry Standard for Cultural Relics Protection of the People's Republic of China".

While all these different governmental departments are contributing to support and to develop- in a fragmented way- the national industrial heritage protection practice, the action headed by the Ministry of Industry and Information Technology is more centralized and directed to promote a national standardize procedure. Among all the MIIT's operations, the *National Industrial Heritage List* represent the most official identification and "labelization" system. Although the procedure is based on the voluntary application of the owner, the on-site visit and the final approval are processed by experts and announced by the Ministry of Industry and Information Technology. On this purpose, Porf. Liu added: "Since the lists are based on the voluntary process, the statistics on the national

industrial heritage sites listed by the MIIT do not necessarily mirror the actual situation. We just held a meeting last week to discuss that the *Interim Measures* should be changed to Measures".

If on one side the national industrial heritage lists are promoted through a bottom up procedure based on the spontaneous candidacy of the owner, the China Industrial Heritage Protection List promoted by the Association for Science and Technology is nominated by experts which identified through a bottom up selection the sites to put in the lists which are lately confirmed by the Association for Science and Technology and the Planning Society. By the way, among the two typologies of industrial heritage lists (the one by the MIIT and the one selected by the academic organizations), the one promulgated by the Ministry is considered the "official one", even if- it has to be specified- that there are no special funds to support the system and there are no penalties for wrong management measures. The industrial heritage system, said Liu Boying, is very different from the more centralized and ruled cultural heritage system: ""National Key Cultural Relics Protection Units" listed by the State Administration of Cultural Heritage's and ruled by the 1982 Relics Protection Law are supported by special national funds and foreseen specific punishments for destroying or illicitly sell cultural relics. Comparing the two systems, the strength of the cultural one is evident. But, in any case, even if the industrial heritage system appears to be not so strong, even a weak management is always better than no management at all and all the sites listed on the national industrial heritage lists will certainly not be easily demolished. How to make the protection system more effective is an individual site's project which needs to be constantly explored and improved". China's industrial heritage protection and management system is based on the identification of the sites an on the acknowledgment of its value: "given an heritage site, its value is far more important than the utilization of the space. However, due to the huge industrial heritage planning, not using it would be a great waste of structures. It is very important to promote the scientific approach on protection strategies and to enhance the innovation of building reuse. Protection is the foundation, value is the need to be interpreted and utilization is the completion of a circle process", said Prof. Liu.

CHAPTER 3 MAPPING THE CHINESE INDUSTRIAL HERITAGE

Starting from 2015 China issued a series of policies with the aim to elaborate a national standardized process to identify and manage its industrial heritage. The previous chapter deeply examined the policies, the ideological debate and the institutional process which brought China to develop a national industrial heritage practice.

The aim of this third chapter is duale: to describe the identification and management practice adopted at national level by the country and to collect the already identified national industrial heritage site through a census. The methodology adopted to conduct this part of the research is both qualitative and quantitative. The main research source for this part of the study is constituted by the four official lists of the national industrial heritage sites selected and by the Ministry of Industry and Information Technology from 2017 up to 2020. This section of the research would like to offer a deep insight on the real objects which compose the Chinese industrial heritage, trying to building up a census and a database which could be useful tools to picture out what is considered as key national industrial site in China and to monitor its conservation, management and its eventual touristic valorization.

The census has been built starting from the translation of the lists from Chinese language to English and by the enrichment of the information obtained by the lists with an intertwined research on the history and the values of every single site. All the information is systematized in a table which constitutes the census; the census is then elaborated into a more synthetic database which allowed the author to adopt a quantitative methodology to read the Chinese industrial heritage's field and convert it into graphics and numbers. The quantitative research is accompanied by the analysis of the official documents issued by different central agencies in order, once again, to put the census and the quantitative results within a legal and administrative framework which allows to understand the criteria adopted by the central government to identify and manage its national industrial heritage.

3.1 Becoming an industrial heritage site

3.1.1 Industrial Heritage: values and historical categories

As deeply analyzed in the previous chapter, the *Guiding Opinions* and the *Interim Measures* represent the pillars of China's national practice on industrial heritage. As officially remarked by the Bureau of Industry and Information Technology, the explicit aim of the documents is "to promote the protection and utilization of industrial heritage by establishing a scientific and standardized mechanism of identification" (Bureau of Industry and Information Technology, 2018). To proceed into the selection process, which- as it will be later explained- is based on a voluntary application of the enterprise's owner which has to be verified by all administrative levels of Ministry of Industry and Information Technology, the values taken into consideration to identify industrial heritage are four: historical value; scientific and technological value; cultural and social value; artistic value (Bureau of Industry and Information Technology, 2018; MIIT, 2017, 445; MIIT, 2017, 589).

The industrial heritage values started to be discussed among professionals and scholars at the beginning of 2000 when it was felt the necessity to label this new typology of heritage. The academic debate¹ started to be more and more vivid after the 2006 Wuxi Forum that can be considered the first occasion in which industrial heritage was officially recognized as new heritage category. The *Wuxi Recommendation*, which- after the approval of the State Administration of Cultural Heritage- assumed a constitutional legal force², represented the first document to define industrial heritage in his values, principles and meanings. The *Wuxi Recommendation* officially recognized industrial heritage as characterized by historical, social, architectural, technological and aesthetic values (State Administration of Cultural Heritage 2006; Lu, Liu et Wang 2020).³

As already discussed in Chapter 1, in 2006, social and cultural values were not still officially recognized by central authorities as proper values to attribute to Cultural Heritage. It was just by 2015, with the publication of the revised edition of *China*

¹ See Liu and Li 2006; Xing, Ran, Zhang 2007; Tang and Tang 2011; Gao and Chang 2017.

² See chapter 2, paragraph 2.3. "Industrial Heritage in China: defining a new category of the heritage".

³ The translation of the original document has been provided by Lu, Liu et Wang 2020, p. 502.

Principles, when the cultural and social values were finally accepted as evaluation criteria to identify the national cultural heritage. The acknowledgement of the social and cultural values enhanced the valorization of sites that before were not considered as part of the national heritage⁴. Given these new accepted values, - social and cultural ones-, the central government started to focused on new categories of cultural heritage and the 2015 edition of China Principles offered a second official definition of what was considered industrial heritage in China. The commentary to the first article of the charter reports: "Industrial heritage specifically refers to modern and contemporary industrial structures, equipment and products that demonstrate the development of industrial work processes and technology; the significance of industrial heritage carries the same importance as other categories of heritage site. The industrial development era is an important period in China's history. Industrial heritage is a witness to this period of history. The buildings and structures at some industrial heritage sites may have also become local landmarks. Industrial heritage may have had a profound effect on the local community and culture and may have become a cultural medium with strong local character. The structures and buildings, landscape and its setting and important pieces of equipment are all components of this heritage" (ICOMOS China, 2015).

After the official acknowledgement of the "cultural significance" along with the more traditional historical, scientific and artistic values, industrial heritage became a proper label of the heritage, a new category of the national legacy to look at.

According the *Interim Measures*, national industrial heritage refers to the industrial relics that have formed during the long-term development of Chinese industry, carrying "high values" recognized by the Ministry of Industry and Information Technology. Which values? By interpreting the *Interim Measures*, it is understood that, first of all, the site has to be characterized by an iconic historical significance which makes it be a witness of the national industrial development. Secondly, the site has to carry a high scientific and technological value, being a representative of important transformations of the national

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⁴ See chapter 1, paragraph 1.5. "China Principles. Drafting process, debate and values"

⁵ Art. 1.2: Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups (ICOMOS Australia 1999).

industrial production technology, reflecting technological innovations and breakthroughs of its times and having demonstrated strong impacts on the subsequent development of the national industry. As third important value, the site has to be representative of strong social, economic, and cultural developments at its time, showing a strong cultural significance commonly recognized by the community and carrying high social and cultural values. As fourth value, the *Interim Measures* mentions the importance of the aesthetical and architectonical relevance as values to be considered for the industrial heritage, being them representatives of the history of art and architecture of their times (Bureau of Industry and Information Technology. 2018). In few words the Art. 7 of the *Interim Measures* closes the decennial scientific debate on the industrial heritage values, which are definitively recognized in: historical values, scientific and technological values, social and cultural significance, artistic and architectonical value.

As soon as principles, criteria and values to define and evaluate industrial heritage became clearer, in 2017 a pilot project was launched in order to test policies and values. Since industrial heritage is considered an important carrier of the industrial values and history of the country, and given the wider ideological framework of *Made in China 2025* program which gravitates around the concept of enhancing China's industrial culture⁶, the promulgation of the *Interim Measures* represented a key national measure to implement the *Guiding Opinions* and to regulate the identification and protection of industrial heritage in the country.

To test the effectiveness of the value-based theoretical framework debated along the years and to assess the identification process which- at the time was under elaboration by the Ministry of Industry and Information Technology⁷, a first experimental plan was launched in Liaoning, Zhejiang, Jiangxi, Shandong, Hubei, Chongqing and Shaanxi in order to test the effectiveness of the measures (MIIT, 2017, 445). As result of this first launching program was the selection of the first 11 sites which composed the first batch

⁶ As explained in the previous chapter, the concept of industrial culture stands for the "sum of material culture, institutional culture and spiritual culture formed during the national process of industrialization and modernization which penetrated into industrial development. It is an important concept of the socialist culture with Chinese characteristics". (Bureau of Industry and Information Technology, 2018).

⁷ At that time the Interim Measures for the administration of national industrial heritage were under discussion and elaboration by the MIIT.

of China's industrial heritage listed to be protected at national level⁸. These 11 sites had been selected on the basis of the four values already mentioned and are representatives of the historical industrial development of the country.

Referring to the official documents (Guiding Opinions, Interim Measures and Interpretation of Interim Measures, Bureau of Industry and Information Technology, 2018) and to scholar's researches (Que 2008; Ai 2019; Liu 2020)⁹, the history of China's industrial development is commonly divided into four main periods: the first refers to the development of the traditional handicrafts during the ancient times and, as demonstrated by the census of this study¹⁰, its mainly characterized by archeological sites related to rise-based wine production, distillation of traditional liquor's site, traditional porcelain workshop or ancient mining sites. The second period of the country's industrial development finds its beginning with the Opium War (1840) and its end with the decline of the Qing Dynasty (1911). This period is also recognized as the Westernization Movement and, from the point of view of the industrial legacy, it is characterized by a variety of remains which well represents the entrepreneurial efforts of the time, greatly sustained by foreign funds and Sino-foreign joint ventures. The third historical stage of the national industrial development started with the end of Qing Dynasty (1911) and last until the foundation of the People's Republic of China (1949). The industrial remains of this period are mainly constituted by public and private entrepreneurial efforts which contributed to the defeat of the Japanese forces during the Second Sino-Japanese war (1937-1945). The fourth, and last phase of China's industrial development starts with the foundation of the modern country (1949) and lasts until the late Seventies early Eighties with the beginning of the beginning of the Reform era (1978) and economic reforms (1982). The industrial legacy which largely represents this period is the one related the medium and large-scale industrial projects developed by China during the "First Five-Year Plan", the 156 Key national projects and the so called Third Front movement

⁸ See the paragraph 3.2.2 of the chapter 3 of this study "First Batch of National Industrial Heritage List. December 2017"

⁹ See Chapter 2, paragraph 2.1.1 "Chinese Industrialization: some historical premises" of this study.

¹⁰ See the database at APPENDIX IV of this study

projects¹¹ (APPENDIX IV; He et Zhou, 2015).

3.1.2 Identification and management process

The Interim Measures clearly states that the identification process of the national industrial heritage starts from the voluntary action of the owner. The owner (private or public) has to assume the responsibility to promote its industrial property to be listed among the national protection lists. He detains the duty to carry on the application of the site according to the Ministry of Industry and Information Technology's procedure. The owner is in charge to set up special department or personnel explicitly dedicated to this purpose, which have to take care of the application procedure and to monitor the selection process. On behalf of the owner, this special department in charge to carry on the procedure, has to present to the local Ministry and Information Technology authorities the following documentation to initiate the application process: the certificate of the estate property rights; pictures, drawings, projects, files, and data to document the status quo of the architectonical complex; the protection and management plan which the owner intend to adopt for the re-utilization of the industrial heritage site along with other documents and materials which can prove the value of the industrial legacy. In some cases, it happens that the candidacy of a site is promoted and supported by different public agencies or institutions which are not directly part of the factory's management, such as China Association for Science and Technology¹² or the Urban Planning Society of China¹³. These two institutions, being non-governmental organizations, act like a superintendence

¹¹ The Third Front Movement represented a huge industrial development plan launched by China in 1964. It saw the engagement of the nation in large-scale investment on national defense, technology, basic industries (including manufacturing, mining, metal, and electricity), transportation and other infrastructure investments. Although the "Third Front" is a concept borrowed by the geo-military field, its aim was the empowerment of underdeveloped economies of the country, so that it covered 13 provinces and autonomous regions with its core area in the Northwest (including Shaanxi, Gansu, Ningxia, and Qinghai) and Southwest (including nowadays Sichuan, Chongqing, Yunnan, and Guizhou). The plan industrialized part of China's most interior and agricultural region stimulating previously poor and agricultural economies in China's southwest and northwest.

¹² China Association for Science and Technology is the largest non-governmental organization of scientific and technological professionals in China which serves as a bridge to link the Communist Party of China and the Chinese government to the country's science and technology community. It was founded in 949 when a number of the national scientific and technological organizations gathered to dedicate all their efforts to the building of New China (http://english.cast.org.cn/col/col471/index.html).

¹³ Urban Planning Society of China is a non-governmental institution founded in 1956 with the scope to gather urban planners across the People's Republic of China under one legally registered academic organization at state level (http://en.planning.org.cn/upsc/).

on state-owned industrial heritage, monitoring the status quo, promoting candidacies of public industrial properties and promoting parallel census and lists. The census presented in this study reports different cases of industrial heritage's candidacy promoted by these institutions acting on behalf of the industrial heritage's owner; for instance, China Association for Science and Technology and the Urban Planning Society of China Among promoted the nomination of Wenzhou Alum Mine, the site n. 8 of the First Batch of National Industrial Heritage List, the Jinxing Coal Mine and the Taiyuan Arsenal, respectively the site n. 5 and 11 of the Second Batch. It is understood that we are mainly talking about state-owned industrial properties where the owner, being the state (intended

as central government or local government) has the duty and the benefit to list the properties to be protected at national level, as we saw for the Cultural Heritage. Receiving

the label of National Industrial Heritage site means to activate a wealthy circuit of cultural consumption linked to industrial heritage, which related incomes could be reinvested in

the protection and management of the site.

After the application has been submitted to the local government, local Ministry of Industry and Information technology organizes experts to conduct on-site verifications of the applied project. Once the site has passed the verification, it has to be approved by the central Ministry and officially announced within the National Industrial Heritage List (MIIT, 2017. Interim Measures, Art.9-10).

It is significant how the *Interim Measures* confirmed the traditional practice which has belonged to Cultural Heritage protection and management process since the foundation of the Chinese practice. As explained in the first chapter of this study, the 1961 *Provisional Regulations on Protection and Administration of Cultural Relics* (UNESCO 1961) recognized for the first time in Chinese history the necessity to protect immovable heritage by establishing the four legal principles for the management of heritage sites: to identify a physical boundary to well mark the area of the site under protection, to erect a sign declaring the site is protected, to establish an archive for site's records and to nominate the administrative resources and persons or agency in charge to manage it (Rogers 2004). Although the *Interim Measures* are not directly referring to cultural heritage, it is meaningful that the document is linking the industrial heritage procedure with the traditional cultural heritage's protection process in recommending the same four conservation principles. So that, the art. 11 of *Interim Measures*, invites the owner to set

up a sign to mark the heritage area in which is specifies the name of the heritage site, the name of the certification body (the Ministry of Industry and Information Technology) and the time of certification. The art. 14. informs that the owner of the national industrial heritage shall organize a special department to monitor the preservation of the heritage, to delimit the scope of protection with effective measures in order to maintain the layout, structure and architectonical style and features of the heritage. The art. 15, instead, specifies the importance to organize a complete heritage archive to record the protection of the core items of the national industrial heritage site, to collect information of remains, and to monitor the maintenance, the conservation, the development and the utilization with the record of the funds involved. The Ministry of Industry and Information Technology is then responsible to establish a national industrial heritage database where to merge, collect and coordinate all the single national industrial heritage archives' data.

Once the site is officially recognized as protected at national level, it has to be restored on its damaged parts in respect of the value at the basis of the national cultural heritage system which recalls to the respect of the site's original condition. Articles 15, 16 and 17 of *Interim Measures*¹⁴ in inviting to monitor the original conditions of the sites, recall in somehow to the principle of authenticity and to the pioneering contribute of Liang Sicheng in promoting the domestic heritage protection practice, principles which are still enshrined art. 14¹⁵ of the 1982 *Cultural Relics Protection Law*. Although *Interim Measures* represents a heritage protection system which stays outside from the legal framework of the cultural heritage system, it is remarkable to notice how the most important cultural heritage principles have been confirmed and adopted by the national

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Article 15: The owner of the national industrial heritage shall establish a complete heritage archive to record the protection of the core items of the national industrial heritage [...] maintenance and repair, development and utilization, funding support [...]. The Ministry of Industry and Information Technology is responsible for establishing and improving the national industrial heritage archive database.

Article 16: The restoration of the core items of the national industrial heritage shall be submitted according to the original application procedure.

Art. 17: The owner of the national industrial heritage shall, in accordance with the requirements of the Ministry of Industry and Information Technology, submit an annual report on the protection and utilization of the heritage to the provincial industry and information technology authority or the headquarters of the relevant central enterprise company, including the work summary for the current year and the work plan for the next year, National industrial heritage ownership changes and planning adjustments, etc.

¹⁵ Article 14: The principle of keeping the cultural relics in their original state must be adhered to in the repairs and maintenance at the sites designated as the ones to be protected for their historical and cultural value and in any removal involving these sites, such as sites related to revolutionary history, memorial buildings, ancient tombs, ancient architectural structures, cave temples, stone carvings, etc. (Law of the People's Republic of China on protection of Cultural Relics, 1982).

industrial heritage protection procedure. The coherence formally adopted by the Ministry of Industry and Information Technology in controlling the maintenance of the industrial heritage sites has a lot of common points with the State Administration of Cultural Heritage's procedure in monitoring the status quo of cultural legacy. Both of the systems are adopting a pyramidal structure of responsibilities within the heritage institutions taking part to the protection process. This parallel correspondence between the cultural and industrial protection and management system is reflected also in its administration of funds. As the cultural heritage system is struggling in receiving funds among the pyramidal and, not always communicating agencies (Huo 2016; Zan 2014), this is reflected also within the industrial heritage protection system where, as for the cultural heritage, the majority of the funds are provided by local government rather than the central Ministry of Industry and Information Technology. Since, as demonstrated by the census and the database (Appendix V) elaborated by this study, the majority of the industrial sites are state-owned and, as required by the Interim Measures, being the owner economically responsible for the protection and management of the site, it is- once againthe local government in charge to support the burden of the funds. As explicitly remarked by art. 13 of *Interim Measures*, it is the industrial site's management which has the responsibility to involve the local government and the provincial-level of Ministry of Industry and Information Technology to incorporate the protection and utilization of national industrial heritage into relevant plans and to support it with not better specified special funds. But this is just a recommendation, there is no other official notices which give more detailed guidelines on funding system for industrial heritage. This lack of effectiveness in the industrial heritage regulations has been denounced by different scholars (Li 2020; Ai 2019; Han 2020) which, recognized in the industrial heritage management system the same lacks and problems demonstrated by influent scholars (Zan et Bonini-Baraldi 2012; Zan 2014; Su et Chen, 2020) for the cultural heritage system¹⁶.

In order to fill the administrative gap on the selection, administration and protection of industrial heritage, a new important document has been recently released by central departments of the government. In May 2021 the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of

¹⁶ See the paragraph 1.6.2. Current administrative system of Chapter one of this study.

Education, the Ministry of Finance, the Human Resources and Social Security, the Ministry of Culture and Tourism, the State-owned Assets Supervision and Administration Commission of the State Council and the State administration of Cultural Heritage jointly issued *Implementation plan for promoting the development of industrial culture (2021-2025)*, a document which will be analyzed in the next chapter. It is worthy to note how the Chinese government since 2006 is constantly working on trying to define a best national practice to promote the protection and reuse of its industrial legacy.

3.2 Census of the Chinese national industrial heritage (2017-2020)

3.2.1 Methodological approach

Based on the regulation analyzed in the second chapter of this research and adopting the evaluation and management process just described in the previous paragraph, China started to carry on a national survey and to list its industrial legacy through official batches published at the end of every year starting from 2017. As previously mentioned, the first list, was the result of a pilot project launched in Liaoning, Zhejiang, Jiangxi, Shandong, Hubei, Chongqing and Shaanxi which resulted in the selection of the first eleven sites put under protection at national level. The list was issued in December 2017 and was followed by other three lists covering the entire territory of China, respectively published in December 2018, December 2019 and December 2020 by the Ministry of Industry and Information Technology. This part of the study translates and analyses the data of the four lists integrating the records within a census then elaborated in a database.

The result of the census pictures out the industrial heritage conservation phenomenon in China, updated to December 2020, embracing a total number of 164 sites listed as nationally relevant.

The methodological approach adopted to complete the census is based on the official lists published by the Ministry of Industry and Information Technology on his website page. The author translated the lists and organized the data within a table composed by five columns. The first column presents the identification number of the industrial heritage site as officially reported in the ministerial lists. The second column indicates the name of the site, while the third reports about its exact geographical location within the Chinese territories. On the fourth column in are registered all the industrial remains which

characterize the industrial site, while the fifth column presents some historical notes which help to better understand the industrial remains listed in the fourth column and to contextualized the historical, social and cultural and artistic values of the industrial heritage sites. While the first four columns (serial number; site's name; address and industrial remains) are directly translated by the author from the official lists, the contents of the fifth column have been integrated by the author to enrich the understanding of the lists and to help to contextualize the choices of the sites among the lists. The "notes on heritage values" have been collected through the official web sites of every single industrial site and double checked by the author comparing that information on the

The census intends to present a comprehensive picture of the status quo of the listed industrial heritage in China in order to demonstrate the progresses made by the country after a long incubation of regulations and debates. The census presented by this study maintains the same structure and division of the sites in the four lists in the same way in which the sites are organized by the Ministry of Industry and Information Technology's lists, in order to provide the same structure and order of selection of information provided by the official documents. What emerged at a very first sight is the enlargement of the industrial heritage sites selected year by year. After the first pilot project launched in 2017 which resulted in just eleven sites selected, the second list quadruplicated the number, arriving to present 42 sites. The amount of industrial heritage selected slightly increased the following year with 49 sites, arriving to 62 discarded factories selected in 2020.

To the extent to make the census a tool useful for further studies, the author elaborated the information into a synthetic database [APPENDIX V] which allows to adopt a quantitative methodology to read the industrial heritage phenomenon.

The database is a Microsoft Excel table composed by eleven voices. The first column presents the progressive number of all the sites in order to give to each industrial heritage a specific identification number independently from the lists it belongs. The second column contains the number of the list which the site belongs, while the third column registers the identification number of the site as it coded by the ministerial lists so it is always possible to precisely identify a specific site and relate it to the official documents.

"Industrial Heritage Network" web portal¹⁷.

¹⁷ Industrial Heritage Network: http://www.dayexue.com/Article/Index.html

The fourth column is presenting the name of the site as it has been translated by the author on the census, giving the possibility to always refer to all the sites in both the documents through the use of the same identification number and site's name. The fifth column shows the geographical location of the sites indicating the administrational region or municipality the sites belong. The sixth and seventh voices are referring to the foundation date of the industrial plant, respectively indicating the exact year of the establishment of the complex and the industrial historical period the site is belonging. The historical periodization will be useful for a latter elaboration of the data to the extent to understand how the listed sites are distributed in term of historical periods and which stage of China's industrialization history is better represented. The eighth cell is indicating the typology of industrial production the site is representing. The latest three columns are containing precious information to a better understanding of the Chinese industrial heritage phenomenon: the ninth cell is reporting the private or public (State or local-state owned company) ownership of the industrial heritage site. The tenth voice specifies if the site has been already labeled as national key cultural relic or if it is considered Intangible heritage site. The last column is reporting data about the reuse of the industrial site whether it has been, or it is in process to be, regenerated in an industrial park or if it is part of an heritagization project. Also, in this case, to fill the information regarding the history of the site, the property and it's heritagization status, the author used web site sources accessing to the official web site of the local governments where the sites are located and double-checking the info through the Industrial Heritage Network and the website's pages of the single industrial sites.

If the census gives a more precise picture of every single industrial heritage site listed, the database allowed to obtain a national picture of the Chinese industrial heritage, elaborating the data collected into numbers, percentages and graphics, mapping the geographical distribution of the sites, diagramming the historical periods of the Chinese industrial history and picturing the nowadays status quo on the heritagization process of the national industrial legacy. The quantitative data and the graphics have been obtained by the author using Microsoft Excel program. The findings will be showed in the next chapter.

3.2.2 First Batch of National Industrial Heritage List. December 2017

As previously mentioned, in 2017 the Ministry of Industry and Information Technology launched a pilot project in order to test the policies and the values academically, scientifically and politically debated over the years and to extent to propose a trial for a standardize national identification system to select and protect industrial heritage in China. The first experimental plan was launched in Liaoning, Zhejiang, Jiangxi, Shandong, Hubei, Chongqing and Shaanxi in order to test the effectiveness of the measures (MIIT, 2017, letter n. 445). As result of this first launching program was the selection of the first 11 sites which composed the first batch of China's industrial heritage listed to be protected at national level. These 11 sites had been selected on the basis of the four values already mentioned and are representatives of the historical industrial development of the country. This list represents the test which preceded the formulation of the first national regulation concerning industrial heritage, the Interim Measures for the administration of national industrial heritage, which have been published the following year, in 2018. This first group of sites can be considered the very beginning core of the industrial heritage protection and management practice which later developed into a standardized national practice.

On December 20th 2017 the Ministry of Industry and Information Technology issued the First Batch of industrial heritage national lists which selected the sites as shown by the following table [Table 3.1]:

Table 3.1 First Batch of industrial heritage national lists

Serial number	Name	Address	Main industrial remains	Notes on heritage values
1	Changyu Brewing Company	Zhifu District, Yantai City, Shandong Province	Underground wine cellars, old gate of "Changyu Brewery Company"; "Changyu Road" plaque and Changyu land boundary stone; 1892 Club building (former residence of Mr. Zhang Yishi, the founder); Changyu Treasury; imported oak barrels of Qing Dynasty; plate and frame filter; still; Venus Gaoyue Brandy Wine, Sun Yatsen's inscription by 1912; 1915 Panama World Exposition Medal;1937 Cabernet Registration Certificate.	The site represents China's first modern industrialized wine company and Asia's first and largest underground wine cellar site, built in 1905.
2	Anshan Iron and Steel Plant	Tiexi District, Anshan City, Liaoning Province	The early architectural layout of Anshan Iron and Steel Plant was covering an area which included: Taiding District, the eastern area of Wuyi Road, the northern portion of Tiedong Erdao Street, and the southern part of Bagua Street in Zhanqian District. The core items of the Anshan Iron and Steel Plant heritage site include: transportation system office building, Jingjing Liao site, Showa Steel Plant's guest house; Showa Steel Plant's Research Institute; Showa Steel Plant's Research Institute; Showa Steel Plant's headquarter Office, office buildings, Dongshan Hotel complex; one builder locomotive; Showa Steel's workshop, No. 1 blast furnace; one electric locomotive; rolling mills.	In October 2019, the early buildings of Anshan Iron and Steel Plant were included in the Eighth Batch of National Key Cultural Relics Protection Units.
3	Lushun Dockyard	Lushunkou District, Dalian City, Liaoning Province	Dock, wooden workshop, lifting warehouse, dock bureau office building, telegraph bureau, pump room, 1 dock lock, 3 vises.	One of the earliest large- scale shipbuilding enterprises in modern China; the first modern shipbuilding and repairing plant in northern China; it was designed and built by China, Germany, and France. It was one of the

				world's famous shipyards; the shipyard erected the first domestic and international telegraph line in Northeast China.
4	State-run Jingdezhen Universe Porcelain Factory	Zhushan District, Jingdezhen City, Jiangxi Province	Old factory buildings characterized by a zigzag structures, herringbone and slope shape; raw materials workshop for ceramic production, molding workshop, smelting workshop, painting workshop, porcelain selection and packaging workshop, fourth-generation kiln site, ceramic molding operation line from the 1950s to 1980s, ceramic production tools and related historical archives.	The factory took the lead in adopting mechanical mud making, glaze making and blank forming, changing the traditional Chinese craftsmanship of handmade clay which dates back a thousand of years.
5	Xihuashan Tungsten Mine	Dayu County, Ganzhou City, Jiangxi Province	Mining plant, machinery plant, industrial plant and auxiliary buildings; main flat; Soviet expert office building and residence; technical files (exploration materials, Soviet mining design texts, drawings; tungsten ore records, etc.)	It represents the longest mining project and the largest production output of tungsten mines; it was an important funding location for the Red Army in southern Jiangxi. After the founding of the People's Republic of China; it made great contributions to the development of the national economy and it is known as "the pioneer of China's tungsten industry.
6	Benxi Lake Coal and Iron Company	Xihu District, Benxi City, Liaoning Province	The former site of Benxi Iron and the Steel No. 1 Iron Plant, the cooling water tower and the Steel's second power plant, Okura Kihachiro's tomb, Benxi Lake Xiaohonglou and Dabailou, Benxi Coal Mine Central Inclined Shaft, Dongshan Zhang Zuolin's Villa, Benxi Lake Railway Station and Caitun Coal Mine; there are 9 vertical shafts and mound tombs.	The first large-scale industrial and mining enterprise established by Japan; No. 1 and No. 2 blast furnaces were among the earliest iron-making blast furnaces in China.

7 Baoji District, Underground-workshop; Shenfu The old site is the most Jintai Shenxin Yarn New Office Building; Lenong complete Baoji City, remaining Factory Shaanxi Villa; thin shell workshop; 1921 industrial site of the Antiloom; 1940s movie projector. Japanese War in China. It **Province** once supported the supply of cotton yarn of the entire Northwest area and was also a modern industry in Baoji. It was included in the Eighth Batch of National Cultural Key Relics Protection Units. Protection project by the Shaanxi Provincial Institute for cultural heritage. Wenzhou No. 1 crystallization pool, No. 1 The candidacy of the site 8 Cangnan Alum Mine County, furnace alum smelting workshop has been sponsored by the Wenzhou City. and datangshan Alum smelting China Science Zhejiang site; Jilong Shan Mining Cave, Coordination and Smelting Furnace and Alum Out Province Department **Publicity** Pond; Fudan Village Miners along with the Innovation Living Area. Strategy Research Institute of the China Association for Science and Technology and the Urban Planning Society of China. 9 Linghu Silk Nanxun Wharf, cocoon warehouse, water Founded 1946 in bv tower and supporting pool, national capitalist Zhang **Factory** District. chimney, boiler room, 2 vertical Rongchu, it was the largest Huzhou City, reeling machines, reorganization Zhejiang modern enterprise Province workshop, 8 sets of re-shaking China at that time. Since machines. lighting inspection its establishment, Linghu equipment, dormitories buildings, Silk Factory has been a guest house, medical clinic, leading enterprise of the broadcasting room, auditorium, national silk reeling garden landscape, Xujia Garden industry. and factory records. 10 Heavy steel Dadukou The former workshop site of the factory made The indelible contribution to section mill District, Iron and Steel Plant of the fourth Chongqing branch of the National the victory of the War of Government Iron and Steel Plant Resistance Against Japan, two-cylinder and also made outstanding Committee, the horizontal steam engine, two contributions to steam locomotives and three rails, development of the new

chimneys,	milling	machines,	China's	railway,	milita

			chimneys, milling machines, straightening machines, scraper machines and related archives.	China's railway, military industry, and the progress of the steel industry.
11	Han Yeping Company/// Hanyang Iron Works	Hanyang District, Wuhan City, Hubei Province	Hanyang Iron Works is located in Hanyang District, Wuhan City, Hubei Province. The core items include: rails made in the third year of the Republic of China, Hanyang Iron Works cast iron monument (1894), bricks made by Hanyang Iron Works, converter workshop, electric furnace branch smelting workshop, electric furnace branch maintenance, spare parts room, etc.	China's earliest steel conglomerate. It is composed of three parts: Hanyang Iron Plant, Daye Iron Mine and Jiangxi Pingxiang Coal Mine. It is China's first-generation new-style steel complex. It was the largest steel conglomerate in Asia.
11	Han Yeping Company/// Daye Iron Works	Xisai Mountain, Huangshi City, Hubei Province	(Built in 1921). Smelting blast furnace residues, observation towers, water towers, blast furnace trestle bridges, 4 Japanese-style buildings, 1 European-style building, and steel rails.	
11	Han Yeping Company ///Anyuan Coal Mine	Anyuan District, Pingxiang City, Jiangxi Province	Shenggong Temple (the former site of Ping Mining General Administration), Anyuan Public Affairs General Office (negotiation building), Ping'an Section of Zhu-Ping Railway, and the complete map of Pingxiang Coal Mine Project.	It was one of the earliest companies in China that used foreign capital, technology and adopted machinery for production, transportation, coal washing and coking. The coal mine was built in 1898 and was incorporated into Hanyeping Company in 1908.

3.2.3 Second Batch of National Industrial Heritage List. November 2018

At the end of March 2018, the Ministry of Industry and Information Technology launched the second national industrial heritage identification process. In the meanwhile, the Ministry of Industry and Information Technology was working at the elaboration of the national regulation *Interim Measures for the administration of national industrial heritage*, which has been published in late 2018, more or less at the same time when the second batch has been announced. On November 7th, 2018, the Department of Industrial Policy of the Ministry of Industry and Information Technology announced and, later on published, the Second Batch of national industrial heritage list on the official website. The specific units which have been identified are shown in the following table [Table 3.2]:

Table 3.2 Second Batch of National Industrial Heritage List

Serial number	Name	Address	Industrial remains	Notes on heritage values
1	State-owned 738 Factory	Chaoyang District, Beijing	"The Pentagon (refers to the original Soviet Union Hongxia Cable Power Plant site layout, and the industrial form is preserved intact, presenting a typical former Soviet Unionstyle industrial architectural style and its attached industrial landscape, China's first generation of 0500 series microcomputers, China's first Lide brand ATM machine, analog program-controlled switches and other older generation electronic products, historical archives since the establishment of the factory, audio-visual materials, etc.	It successfully developed and produced China's first automatic telephone exchange, the first electronic tube digital computer, the first transistor computer and the first 0500 series microcomputer. The site had contributed to important projects such as the successful explosion of an atomic bomb and the successful launch of the first satellite.
2	State-owned 751 Factory	Chaoyang District, Beijing	Gas storage tanks, desulfurization tower, special train line, power pipe corridor, furnace and auxiliary process area.	It was built in the Fifties with the aid of the former Democratic Germany's government. It is one of the 156 large-scale industrial projects to be built during the "First Five-Year Plan" period in China, providing

				integrated energy for the electronics industry.
3	Beijing Satellite Manufacturin g Plant	Haidian District, Beijing	Factory No. 1, Factory No. 4, coordinate boring machine, coordinate boring and milling machine, universal tool milling machine, monument to the birthplace of Dongfanghong No. 1 satellite.	The first man-made earth satellite "Dongfanghong-1", the first returnable remote sensing satellite, the first experimental communication satellite, and the first manned experimental spacecraft "Shenzhou-1" that China independently developed, produced and successfully launched Was born here. This industrial site has made a significant contribution to the development of the country.
4	Atomic energy plant "one pile, one device"	Fangshan District, Beijing	The main building of the 101 reactor, the concrete shielding body of the 101 reactor, the main control room of the 101 reactor, the cyclotron workshop and the core components of the main magnet of the cyclotron.	The first China's heavy-water reactor and the first cyclotron (referred to as "one pile one device" for the atomic energy). In June 1958, the nuclear plant was formally completed under the guidance of Soviet experts. It represents the first nuclear science and technology facility built in China. It was included in the Eighth Batch of National Key Cultural Relics Protection
5	Jingxing Coal Mine	Jingxing Mining Area, Shijiazhua ng City, Hebei Province	Seven German-style buildings; Zhengfeng Mine: Well No. 1, old derrick, automobile winch house, electric winch house, power plant unit workshop, warehouse, crown water tower, tunnels, north inclined shaft roadway, Fengshan station, upstream steam locomotive, n. 1178 historical photos.	Units. It is one of the earliest modern coal mines constructed in China; the first mechanized mining shaft in Shijiazhuang area has the reputation of "the best coal field in the north", "a century-old coal capital" and "the first mine in the country". The candidacy of the site was sponsored by the China Science Coordination and Publicity Department and jointly

				sponsored by the Innovation Strategy Research Institute of the Chinese Association for Science and Technology and the China Urban Planning Society.
6	Qinhuangdao Port West Port	Hebei Qinhuangd ao City harbor area	The big pier, the old pier area, the special room of Nanshan Street No. 1, Kailuan Mining Bureau Senior Staff Club, Nanshan Senior Pilot House, Nanzhan House, Mitsubishi, Songchang Foreign Company, Nanshan Hotel, Laogang Weighbridge House Station, Kailuan Mining Bureau Qinhuangdao Manager Office Car Service Office.	It is the world's largest coal export port and cargo port.
7	Kailuan Mining Bureau Qinhuangdao Power Plant	Haigang District, Qinhuangd ao City, Hebei Province	The main building, the fuel railway, the bricks used in the establishment of the factory in 1928, the building's original ceramic wall and floor tiles, the original architectural drawings and structural drawings of the Kailuan Mining Bureau Qinhuangdao Electric Power Factory, the crane and the original lighting, the transformer Phase 6 kV made in Japan.	Qinhuangdao's earliest power plant is a historical testimony of the development of Qinhuangdao's power industry and port; the only power museum in China that was built from an old power plant (designed by electrical engineering workshops in Belgium, in Baroque style)
8	Shanhaiguan Bridge Plant	Shanhaigu an District, Qinhuangd ao City, Hebei Province	The original steel beam workshop plant, the blower plant, the two-meter milling machine tool, the section steel straightening machine, the telegraph of the Beijing-Fengzhou Railway Administration directly under the Ministry of Communications in 1914, the steel beam manufacturing process of Wuhan Yangtze River Bridge Atlas, The Shanhaiguan Bridge Factory of the Ministry of Railways, archives, factory records, historical photos.	the first group of railway turnouts and even the world's first. One of the

9	Kailuan Coal Mine	Lubei District, Tangshan City, Hebei Province	Wells and auxiliary roadways and winch houses, railway highway overpassing Dadao, central return air shaft, Tangxu railway zero-kilometer sign, No. 29 Yuansi villa, 1901-1952 corporate financial account book, Kaiping Mine Old stock of the Ministry of Affairs, upstream steam locomotive.	The mine laid to the foundation for the development of China's coal industry and national industry, and was the pioneer of China's modern national industry; it was China's earliest modern large-scale mechanized coal mining; China's first refractory material manufacturer using inverted flame kiln firing technology (Majiagou Brick Factory).
10	Qixin Cement Plant	Lubei District, Tangshan City, Hebei Province	There are 16 workshops, 24 units/sets of old machinery and equipment from 1906 to 1995, 25 office supplies from 1862 to 1957, 22 historical archives from 1907 to 1947, trademarks from 1904 to the Republic of China, 30 badges and plaques, 4 types of cement products from 1909 to 1927.	It represents China's first cement plant; It represents the birthplace of China's first barrel of cement (the old cement was measured in barrels). It was once China's largest cement company.
11	Taiyuan Arsenal	Xinghuali ng District, Taiyuan City, Shanxi Province	There is a total of 52 factory buildings, Spark Club, 225 sets of machines and 27 weapons and equipment/pieces.	Selected by the China Association for Science, by MIIT, China Association for Science and Innovation Strategy Research Institute, China Urban Planning Society One of the early modern military factories in China.
12	Yangquan No.3 Mine	Mining District of Yangquan City, Shanxi Province	Core items: No. 1 shaft flat tunnel, No. 2 shaft inclined, auxiliary roadway winch house, lifting area. Jiadigou mine site, Dongzhang n.8 well. The coal transportation area marked by the special coal preparation railway connected to the Shijiazhuang-Taiwan Railway, the washing and processing area marked by the coal washing plant and ancillary facilities, the gas gathering area marked by the	The coal mine made great contributions to the country's economic construction

			Dayaogou Gas Drainage Pumping Station, and Yangquan The cultural and educational area marked by the No. 3 Mine Middle School and the Staff School, the power supply area marked by the Mengcun Decompression Station, the workers dormitory area marked by the Tuipo cave dwelling, and the mine ventilation area marked by the Majiapo main fan machine room. Baojin company archives, drawings of underground tunnels of the third mine.	
13	Shenyang Foundry	Tiexi District, Shenyang City, Liaoning Province	Shenyang Foundry N. 1 workshop, 5 tons cupola, sand discharge system, sand drying system, shot blasting system, belt conveyor, hopper, drying kiln, sky cranes, dust extraction equipment, sand shaker base, intermediate frequency induction heat preservation electric furnace, hot metal ladle, centrifugal fan, fan in front of the furnace, cold rolling tank, sand distribution control room, sand pool.	In 1956, it became the country's first and largest specialized foundry company in Asia. After the relocation of production, the municipal government decided to preserve the Shenyang Foundry as an industrial history witnessing the prosperity of Tiexi District, Shenyang, and transform it into a museum.
14	State-owned Qingyang Chemical Plant	Wensheng District, Liaoyang City, Liaoning Province	TNT Production Line, Nitrogen Chemical Room, Refining Workshop, Packaging Workshop, Tanghutun Substation, Water Supply Workshop, Tanghutun Railway Station, Tokyo Ling Railway Station, Taizigou Office Building, Taizigou Supply and Marketing Building, Taizigou Welfare Building, Taizigou Library Building, Taizigou Library Building, Taizigou Reference Room, Tanghutun Street District, Tokyo Mausoleum Street District, factory construction drawings and topographic maps, factory topographic maps in the early	The factory is known as "the cradle of TNT Explosives in China". Since the founding of the People's Republic of China, the factory has undertaken R&D tasks for a number of national models of propellant and explosives products.

			1980s projects, factory documents (1937-1987).	
15	Tieren one well site/ Iron Man Well Site	Honggang District, Daqing City, Heilongjia ng Province	Well, unloading platform, drilling rig, water well.	Wang Jinxi (after named as Iron man) and his team in April 1960 drove an oil well in Daqing City in only 5 days and 4 hours. It is not only recognized as an important petroleum industry site, but also because it carries precious historical and social significance. It was included in the Seventh Batch of National Key Cultural Relics Protection Units.
16	Jinling Machinery Manufacturin g Bureau	Qinhuai District, Nanjing City, Jiangsu Province	Main machines of the factory, wood factories building, copper coil factory, copper melting factory, copper melting room, 12 workshops, 6 office buildings, 2 material warehouses, 3 dormitory buildings.	The site is considered a pioneering plant of China's national industry: it was Nanjing's first modern mechanized factory and one of China's four major arsenals. It is known as the "cradle of China's national military industry" and is also considered one of China's largest modern industrial park complex. In December 2017, it was included in the second batch of Chinese 20th century architectural heritage project list; January 2018, was included in China's industrial heritage protection list (first) list.
17	Yongli Chemical Industry Co., Ltd.	Jiangbei New District, Nanjing City, Jiangsu Province	Compressors purchased from Germany in 1936, nitric acid tower, sulfuric acid plant, synthetic ammonia plant and equipment, five houses, old three villages, Bunker at No. 380 Fenghuang Road, the history of the establishment of Yongli Chemical Industry Company's sulfuric acid plant.	The founders are considered two pioneers of Chinese chemical industry: Fan Xudong and Hou Debang. The plant was the largest chemical plant in Asia at that time. The Hou's joint soda production method invented by Hou Debang, has a huge impact in the world, and it is still an

				advanced technology in the field of soda production.
18	Maoxin Flour Mill	Liangxi District, Wuxi City, Jiangsu Province	It preserves a complete flour production process line: from the initial measurement and cleaning of the wheat to the second cleaning, three grinding, sieving and grading to produce flour and then to the packaging and transportation.	Founded in 1900 by the national industrial and commercial entrepreneurs Rong Zongjing and Rong Desheng, it was rebuilt in 1946. The plant fully adopted advanced Western technology and equipment. The introduction of advanced management concepts promoted the transformation of the flour manufacturing industry from traditional processing to a modern industrial technology.
19	Dasheng Yarn Factory	Chongchu an District, Nantong City, Jiangsu Province	Bell tower, public affairs hall, expert building, Qinghua workshop, raw cotton warehouse, Nantong textile technical school site, Tangzha industrial primary school teaching building.	One of the early modern Chinese national capital enterprises, the modern joint-stock textile enterprise founded by national industrial pioneer Zhang Jian, once accounted for 11.9% of the total number of spindles in the country; Zhang Jian subsequently established a series of factories, schools, museums and local business partners in Nantong.
				The site was listed within the sixth batch of national key cultural relics protection units
20	Hefei Iron and Steel Plant	Yaohai District, Hefei City, Anhui Province	Small blast furnace, blast furnace area, railroad tracks and other production facilities.	It opened the prelude to the modern industry in Anhui.
21	Jingxian Mingxing Rice Paper Factory	Xuanchen g County, Anhui Province	Traditional Rice paper making technology, finished product warehouse (now renamed as Rice Paper Museum), production area, old office building, Great Hall, guest	Jingxian Xuan Paper Factory is the largest production base of rice paper and its processed products among the "Four Treasures of the Study". It is

			house (now known as Jinwu Building).	also a powerful historical witness to the development of the rice paper industry from hand-crafted workshops through joint ventures, public-private partnerships, state-owned operations, and shareholding systems. The factory complex has a distinctive Hui-style architectural style.
22	Lidu Liquor Factory	Jinxian County, Nanchang City, Jiangxi Province	15 offices in the old factory area, wine warehouse, machine repair workshop, cellar room, power generation room, 16 wine cellars in the Yuan Dynasty, 12 wine cellars in the Ming Dynasty, 32 wine cellars in the Qing Dynasty, 1 drying room in the Ming Dynasty, Qing Dynasty 1 Daiqiantang, 1 Ming Dynasty distillation facility, 1 Qing Dynasty distillation facility, 1 Ming and Qing Dynasty stove, 1 Ming Dynasty water ditch, ceramics, wine mash, stone mortars, bronze utensils, iron tools There are more than 350 pieces of inscription bricks, wooden utensils and bamboo sticks.	The distillery has a wine-making history of more than 1,500 years. After the prosperity of the Qing Dynasty, Lidu liquor became famous all over the country. In addition to wine-related facilities there are a large number of ancient pottery fragments, among which wine utensils are the most abundant. In May 2006, it was approved by the State Council as the sixth batch of national key cultural relics protection units.
23	Jinan Second Machine Tool Factory	Huaiyin District, Jinan City, Shandong Province	29 factory buildings, 2 equipment and tools, 4 sets of office appliances; archives	It was one of the national machine tool industries in the early days of the People's Republic of China. In different periods of the national economic history, the company has successively developed more than 600 kinds of national first products, providing important equipment support for automobile, aerospace, transportation, energy and other national key industries.

24	Tsingtao Brewery	Shibei District, Qingdao City, Shandong Province	The original comprehensive office area, the original brewing production area, the original staff club, 1896 Siemens motor, saccharification pot, gelatinization pot, filter tank, boiling pot, German factory drawings, beer fermentation barrels, wort coolers, pennants, yeast recovery tanks, beer filters, cotton washing machine, cotton press, barreltype wine filling machine, malt feeding hopper, Oktoberfest keg, beer advertisement, stock issuance form.	High historical, architectonical, technological and social values. A model on protection and reuse of Chinese industrial heritage since the site opened to the tourism at the beginning of Nineties.
25	Qingdao National Cotton No. 5 Factory	Sifang District, Qingdao City, Shandong Province	Sawtooth main plant, water tower, old well, textile equipment (cotton baler, spinning frame, roving frame, draw frame, small baler, 44-inch automatic shuttle changing loom, overweight balance, large transformer, small transformer, yarn shaker, waste cotton processing machine, coarse sand hardness tester, sliver length measuring instrument, voltage and current meter, wet alarm valve, steam distribution valve, parallel machine head), railway bridge, air conditioning room, "Red Pine Liang Warehouse", lithium bromide refrigeration station, textile museum.	Its establishment and development contributed to the triumphant status of China's textile industry in the early 20th century. Important architectural value since it is representative of the modernist architectural style of the German Bauhaus.
26	First tractor manufactory	Luxi District, Luoyang City, Henan Province	Office building, factory square, stamping workshop, tool workshop, assembly workshop, engine workshop, factory gate.	It is one of the 156 large-scale key industrial projects developed by China during the "First Five-Year Plan" period. It is known as the "eldest son of the Republic" of China's agricultural machinery industry. The plant produced China's first tractor, first road roller and first military off-road truck.

27	Luoyang Mining Machinery Factory	Luxi District, Luoyang City, Henan Province	The first metalworking workshop, the second metalworking workshop and the first 2.5-meter-diameter hoist manufactured by Jiao Yulu and other employees, the former residences of Comrade Xi Zhongxun.	It is one of the 156 key projects constructed during the national "First Five-Year Plan" period, representing the largest mining machinery manufacturing enterprise in my China. In 1975, Luoyang Mining Machinery Factory successfully trial-produced my country's first large-scale shaft drilling rig which was of great significance to China's development of coal resources.
28	Tonglushan Ancient Copper Mine Site	Daye City, Huangshi City, Hubei Province	The unearthed cultural relics also include mining and lifting tools, including more than 1,000 wooden and stone tools. Among them are mining tools such as large copper axe, copper chisel, stone drill, potter wheel, furnace building tools, charcoal and auxiliary materials for smelting, pottery, lighting equipment, many items such as daily necessities and weapons.	In 1982 the Tonglushan Ancient Copper Mine site was announced by the State Council of the People's Republic of China as national key cultural relics protection units within the second batch. The site was listed as UNESCO heritage site in 1987.
			The tomb area of the Tonglushan Ancient Copper Mine Site, 23 tombs were discovered and excavated, including 3 tombs in the late Western Zhou Dynasty and 120 related to the Spring and Autumn Period. A total of 170 cultural relics such as copper, pottery, jade, copper and iron ore were unearthed.	
29	Anhua Tea Factory	Anhua County, Yiyang City, Hunan Province	Qing Dynasty tea workshops (1902's entrance and exit of Xinglongmao Tea Shop); wooden tea warehouse built by Mr. Yang Kaizhi; 1950's office buildings designed by Soviet experts; wooden tea warehouse; 1956 three groups of workshops with an all-wood structure; three picking fields	It is the first and largest state-owned enterprise in Hunan Province that specializes in red and black tea processing, as well as a national key frontier tea manufacturer.

			built in the 1950s, office buildings built in the 1970s, movie theaters built in the 1960s, weighing mounds, wooden floating sieve machines, barrel tea kneaders, tea samples.	
30	Chengdu Hongguang Electron Tube Factory	Chenghua District, Chengdu City, Sichuan Province	Grinding wastewater treatment station, 2 old boiler tanks, gallery bridge, picture tube assembly workshop, cadre warning record, 3 chimneys, 2 funnel water towers, locomotive square.	Is the first large-scale comprehensive electron beam tube enterprise in China. China's first television were successfully developed here.
			locomotive square.	It has been rated as "National Industrial Heritage Tourism Site" and "National AAAA-Level Tourist Attraction".
31	Luzhou Laojiao winery	Jiangyang District, Longmata n District, Chuzhou City, Sichuan Province	4 wine-making cellars belonging to the Ming and Wanli periods and 1615 wine-making cellars belonging to the Qing Dynasty, 16 ancient wine-making workshops, 3 natural wine storage caves, Longquan Well and Qing Dynasty Well Stele, Mudstone drying hall, traditional wine making facilities such as retort barrel, 1915 Panama Pacific Universal Exposition medal, Tang and Song kiln sites and unearthed wine cultural relics.	Luzhou Laojiao was developed on the basis of the ancient winemaking workshops in the Ming and Qing Dynasties. The 16 breweries passed down from the Ming and Qing dynasties to the present and the 1619 old pit pools are still preserved. It is the earliest national cultural preservation unit of China's wine industry. National key cultural relics protection units
32	The former site of the Chinese Academy of Engineering Physics	Zijing County, Mianyang City, Sichuan Province	The auditorium, the office building of the department, the model hall, the information center, the former residence of Comrade Deng Jiaxian, the former residence of Comrade Wang Yichang, the general building and the battle-prevention bomb shelter.	It was once the scientific research base of the second stage of the development history of China's nuclear weapons science and technology.
33	Wuliangye cellars and wine-making workshops	Cuiping District, Yibin City, Sichuan Province	Ming and Qing ancient winemaking workshops; 15 crypt-style wine fermentation ancient pits (founded in 1368), 159 Qing Dynasty ancient pits; "Wuhetang" courtyard; 679 old	Built in the early Ming Dynasty, the ancient wine- making cellars has an history of more than 650 years.

			cellar pools (built in the 1960s); wheelbarrow, wooden tray, wooden retort, wooden lift, wooden shovel, wooden palm, Wine making facilities and tools such as measuring buckets, drag rakes, buckets, bamboo branches, pure tin condensers; pots and clay pots in the Han Dynasty and cultural relics of drinking utensils and containers in the Song, Yuan, Ming, and Qing dynasties, as well as trademarks, wine bottles, packaging, etc.	The earliest and most well-preserved crypt-type fermentation cellar, pioneering of the the Chinese Luzhou-flavor Daqu Liquor brewing process; starting from the 1960's the wine cellars inherited the traditional Chinese liquor brewing skills.
34	Moutai Distillery Workshop	Renhuai City, Zunyi City, Guizhou Province	"Chengyi" Shaofang roasting site, "Ronghe" Shaofang Ganqu warehouse site, Tingqufang site, roasting site, "Hengxing" Shaofang roasting restaurant site, fermentation warehouse, koji-making area, stepping koji room, fermentation warehouse, koji-making area, stone mill, dry warehouse, and storage workshop, wine library.	It is a testimony of China's national industry's difficult advancement, continuous development and growth since the Qing Dynasty and creation of glorious history.
35	Liyang Aero Engine Company	Pingba District, Anshun City, Guizhou Province	Caves, workshop, tool room, inspection room, machine repair room, production and processing equipment, engine transfer vehicle.	Guizhou Liyang Aviation Engine Company is a major aero engine manufacturer in China.
36	Shilongba Hydropower Station	Xishan District, Kunming City, Yunnan Province	Generators manufactured by Siemens, German, turbines, first workshop, office building, workshops, high-voltage switches manufactured by German Siemens, insurance used by German engineers in 1910 Cabinet, some technical drawings.	It is China's first hydropower station and China's first pumped-storage power station. The site was listed in the sixth batch of national key cultural relics protection units.
37	Kunming Iron and Steel Plant	Anning City, Kunming City, Yunnan Province	Its imitation European-style office building built in the 1940s is well preserved and the large-scale equipment and facilities of the complex sintering-iron-making-steel-	It is one of the country's super large industrial enterprises and one of the top 500 Chinese enterprises.

			makina milina masa m	
			making-rolling process are preserved intact. Many blast furnaces are cleverly combined with the undulating terrain, forming a large-scale industrial heritage in the modern century.	
38	Wangshiwa Coal Mine	Yintai District, Tongchuan City, Shaanxi Province	The well-preserved Soviet- style buildings such as office buildings and coal preparation buildings in the mining area reflect the unique aesthetic taste and the technological development of that age.	It is one of the 156 large-scale backbone industrial projects to be built during the First Five-Year Plan.
39	Yanchang Oil company	Yanchang County, Yan'an City, Shaanxi Province	Yanyi Well, Qili Village Oil Refinery, Wells 1 and 7 and 3, Yanshen exploration Well, petroleum geological education and teaching practice points, Yanyan Cave and Soviet expert guest house.	It is the earliest oil producer in China. is one of the four domestic enterprises with qualifications for oil and natural gas exploration and development
40	China National Nuclear Corporation 404	Gansu province	Reactor, uranium hexafluoride production plant, reprocessing intermediate test plant, self-provided railway station (Fuzhong Station), water intake for production and living, science and technology library, office building, staff club, Chairman Mao Full body statue, Soviet expert building, spherical lathe, steam locomotive.	The plant has achieved an historic breakthrough in China's nuclear weapons and made great historical contributions to the successful explosion of China's first atomic bomb and hydrogen bomb in 1964 and 1967.
41	Liujiaxia Hydropower Station	Yongjing County, Linxia Hui Autonomo us Prefecture, Gansu Province	Retaining dams, sand discharge tunnels, discharge channels, spillways, spillway tunnels, hydropower plants, 1969 gantry cranes, central consoles and archives.	It represents a large-scale hydropower project designed, constructed and built by China during the first five-year plan (1953-1957). After completion in 1964, it became the country's largest hydropower project at the time. milestone in China's hydropower industry and a representative of the highest level of hydropower construction technology.
42	Cocoa sea	Fuyun County,	Mining and transportation equipment, main body of the	Rare metal materials such as lithium, beryllium, and

mining bureau	Altay	87-66 ore dressing plant and	cesium produced in this
	Region,	related equipment, hydropower	mining area have provided
	Xinjiang	plant building, Haizikou dam,	important support to the
	Uygur	generator set, supporting	"two bombs and one star" of
	Autonomo	equipment, machinery plant's	New China and are known
	us Region	building and equipment, old	as China's "meritorious
		wooden truss bridge, office	mines."
		building, expert building, large	
		cafeteria, geological exhibition	
		hall, Russian-style building,	
		collection of geological	
		specimens.	

3.2.4 Third Batch of National Industrial Heritage List. December 2019

In December 2019, the third batch of national industrial heritage lists was announced by Ministry of Industry and Information Technology Industry Letter n. 403. The document, once again, inserts the list within the ideological and political program of the 19th Party's National Congress which promotes the strengthening of the protection and inheritance of cultural heritage, and promote the protection and utilization of industrial heritage. It reports that "after the independent application of the industrial heritage owner, the local Ministry of Industry and Information Technology's verification and experts review, the procedures have determined the third batch of national industrial heritage lists. The documents continues recommending that: "local industry and information technology authorities, relevant central enterprises and owners of national industrial heritage shall actively implement the relevant requirements of the "Interim Measures for the Management of National Industrial Heritage", taking effective measures to strengthen the protection and management of national industrial heritage and innovating the model of the national industrial heritage practice to actively promote the inheritance and development of industrial culture.

After this premise the document announces the third batch of industrial sites listed at national level. The sites are presented in the following table [Table 3.3].

Table 3.3 Third Batch of National Industrial Heritage List

Serial number	Name	Address	Core item	Notes on heritage values
1	Beijing Enamel Factory	Dongcheng District, Beijing	Former staff canteens; ground making machines, bladder wire machines, hand-operated shuttle machines, rolling machines, burning furnaces, punching machines and other mechanical equipment; the original registration data of the public-private partnership in 1956, the personnel files and design manuscripts of Master Qian Meihua, the rubbings of old artists in the enamel factory and other historical files.	Cloisonne, the scientific name of copper tire cloisonné enamel, is an independent variety derived from the metal tire inlay enamel process in China. During the Ming and Qing dynasties, both the imperial supervisor and the manufacturing office set up enamel workshops in Beijing for the royal service. In 1956, 42 private enamel workshops and a manufacturing office dedicated to the manufacture of cloisonne for the court jointly established a public-private joint Beijing enamel factory.
2	Printing Bureau	Xicheng District, Beijing	Main workshop building, clock tower, water tower, expert building; universal engraving machine, single-needle shrink machine, hand gravure printing machine.	This is the first government- run banknote printing company in Chinese history to use the "engraving steel plate gravure" process to print banknotes. It is the birthplace of China's modern banknote printing business and the first enterprise to print stamps in China
3	Dagang Oilfield Gang n.5 Well	Tianjin Binhai New District	Well Gang n. 5; drill bits and tools, pipe wrenches and sample barrels used during the North China Petroleum Exploration; cores of Well Gang 5; historical archives.	It opened a new chapter in the exploration and development of China's oil resources.
4	Zhaogezhua ng Mine	Guye District, Tangshan City, Hebei Province	The "Foreign house" n. 10 is a unique architecture, built for the British official comprador when the Qing government implemented the Westernization Movement and	The Kailuan Coal Mine used large-scale mechanized mining for the first time in China and became the well-known "China's best mine" at that

			established the Kaiping Mining Bureau in the late Qing Dynasty. Other remains are: Well derricks; winch room and internal winch equipment in well 1; tools and badges used in the initial construction of the mine; drawings	time. The mine is representative since was one of the mines that participated in the Kailuan Minmetals strike in 1922 and anti-Japanese site. It has strong technological, scientific and historical values.
5	Liu Bocheng Factory	Yinzhou District, Changzhi City, Shanxi Province	Factory's main buildings, pyrotechnics workshop, mechanics workshop, kiln cave, final assembly workshop, residual walls of the warehouse, water towers, chimneys; historical archives such as the commander-inchief of Zhu De, production plan, etc.	It has an important historical value since it is representative of the anti-Japanese war, as the weapon industry built by Chinese Army during the War of Liberation, it is an extremely important heritage in the history of China's military industrialization and its unique feature in the country is particularly precious.
6	Shigejie Mine	Yinzhou District, Changzhi City, Shanxi Province	Auxiliary shafts, main inclined shaft, "Three Sky Wheel" Lifting device, coal washing plant and ancillary facilities, worker collective dormitories, Soviet-style miner Club, Miner Club Built in 1978; Yufeng coal miners' anti-Japanese memorial site and the former site of Kang Keqing's visit to Shigeji coal mine to spread revolutionary fire; the track produced in the late Qing Dynasty, North Korean machine tools; some media reports, old photos, national science conference awards and other historical archives.	In 1963, Shigejie Mine was regarded as one of the national coal fronts with the highest efficiency, the lowest cost, the best quality, and the most capable organization. It is representative of the Chinese workers resistance during the War of Liberation. In 1990, he was once again set as a model for the whole national coal industry. Eleven party and state leaders, including Jiang Zemin and Li Peng, wrote inscriptions and made speeches.
7	Gaoping silk weaving printing and dyeing Factory	Gaoping City, Jincheng City, Shanxi Province	The original Fifties' zigzag shape factory building; weft winding machines, sizing machines, 1 setting machine, stander, dyeing machines;	Lu silk is representative of Shanxi's silk industry, it was named after Luzhou, one of the three most famous silks typology in China. Because of its exquisiteness and

				beauty, Lu silk became a popular export item in the Ming Dynasty and North Korea called Luzhou silk. The factory was established in 1958 and represented a key project of the country's second five-year plan.
8	Fushun West Open-pit Mine	Wanghua District, Fushun City, Liaoning Province	Mine pit; large excavators, electric locomotives, one bulldozer, one 108-ton mining car, two steam locomotives.	Over the years, the mine has maintained the honorary titles of "National Excellent Enterprise for Ideological and Political Work, Industry-level Standardized".
9	Yingkou Paper Mill	Zhanqian District, Yingkou City, Liaoning Province	Large tank plant, cutting reed plant, N. 9 plant, vertical cooking pots, disc reed knives, dry dust removal system, 2 sets of multi-cylinder letterpress paper machines	In 1951, workers created the "quick cooking method", which shortened the cooking time and as result the output increased 5.5 times, the first national record. In 1967 Yingkou Paper Mill produced the first letterpress printing paper of the People's Republic of China, which solved the problem that printing paper could only be imported.
10	Dalian Refrigerator Plant Foundry	Shahekou District, Dalian City, Liaoning Province	Foundry factory building; DISA 3030 machinery and equipment, molds; historical archives and literature	The Iron Factory was established in 1930. During the period of the Japanese and Manchu reign, the national industry was oppressed and restricted, unable to produce products and equipment independently, and could only rely on repairing foreign refrigerators. Once the factory was freed it represented a big step forward for the national domestic's technology facilities having produced so many refrigerators prototypes which were adopted nationwide.

11	Yizhong Furalji Plant	Fularji District, Qiqihar City, Heilongjian g Province	The core items include a heavy equipment manufacturing plant, a free forging hydraulic press, a memorial for the start of construction, and historical archives.	Over the years, this company has created countless "firsts" in China in terms of independent innovation and substitution of imports. It is the most representative equipment manufacturing base in China and the "living history" of the development of new China's heavy industry
12	Forest railway of Longjiang Forest Industry Huanan	Huanan County, Boli County, Baoqing County, Qitaihe City, Jiamusi City, Heilongjian g Province	Six steam locomotives and a complete railway line, equipment plant and forest railway transportation structure (including iron machining workshop, external combustion workshop, internal combustion workshop, oven workshop, sand casting workshop, station and 42 kilometers narrow gauge railway); diesel locomotives, flatbed cars, seat passenger cars, ton vans, caboose, convertible cars; forest railways supporting facilities, supporting equipment; historical archives.	The small forest train once was as an important tool for transporting personnel and timber in forest areas.
13	Shanghai Mint	Putuo District, Shanghai	The 1920's original office building, former site of the Ministry of Finance of the National Government, water storage tower; balances, rolling mills, punches, edging machines, American stamping machines, imitation engraving machines, turning machines.	It represents a witness of the implementation and modernization of China's currency system and contributed to the development of Shanghai's industrial civilization.
14	Hengyuan Chang's factory	Zhonglou District, Changzhou City, Jiangsu Province	Textile workshops, electrician room, high distribution room, woodworking room, boiler room, machine repair workshop, brick and wood structure building belonging to the end of Qing Dynasty, 5 office buildings, workers canteen, female worker's dormitory, medical office; carding machine and water	The site has a strong historical and technological values.

			spray air-conditioning unit, printing rolling mill and sizing equipment, dump trucks, stone troughs, Hengyuan factory monument, Remington English typewriter, Chinese typewriter; Qing Guangxu two-year land sale contract, Feng Yuxiang inscription factory plaque, Historical archives.	
15	Hengshun Zhenjiang Balsamic Vinegar Traditional Brewing	Runzhou District, Zhenjiang City, Jiangsu Province	Old factory buildings, Hengshun Old Workshop, traditional vinegar cellar, Traditional Vineyard, Laomenlou, Hengshun Rice Industry Old Factory; Traditional Vinegar Making Tools, Traditional Wine Making Tools; Business License in Late Qing Dynasty, Trademark of the Republic of China Certificates, records of production materials in the early days of the Republic, 1960's trademarks and seals.	Zhenjiang Hengshun balsamic vinegar brewing technology is one of the few traditional brewing techniques still in use in China's vinegar industry and has become the representative of traditional brewing techniques. In 2006, Zhenjiang Hengshun balsamic vinegar brewing technology was approved by the State Council of the People's Republic of China to be included in the first batch of National Intangible Cultural Heritage list.
16	Yanghe Distillery	Sucheng District, Suqian City, Jiangsu Province	Cellar belongings to Ming and Qing Dynasties, brewery of the early days of the Republic, 1950's e 1960's wine cellars, 1970's underground wine cellars; Qing and modern pottery altars; historical archives.	At present, the industrial form of the Yanghe old cellars and wine workshops is intact and still in use, Yanghe distillery has also been included Intangible Heritage List. Today's Yanghe liquor enjoys a high reputation as one of the leaders in the domestic liquor industry.
17	Shaoxing Jianhu Rice Wine Workshop	Keqiao District, Shaoxing City, Zhejiang Province	South gate, front building, rear building and other Qing dynasty buildings, drop-off rooms, altar wine warehouses, packaging materials Warehouses and other 1950's and 1960's buildings; Jianhu water intake, clay jars, tile altars, wooden presses, rake tools, wooden steaming	It has important historical, architectonical and intangible values.

			buckets, special curved buckets, stamps.	
18	Gujing Gongjiu ancient distillery	Wucheng District, Luzhou City, Anhui Province	Song, Ming, Ming Dynasty cellar pool group, Qing Dynasty cellar pool group, Ming and Qing dynasty brewing sites, Gujing Gongjiu No. 2 cellar pool group.	The nowadays distillery area originated from the Gongxing distillery, founded during Ming Dynasty (AD 1515). It is an important material testimony to the production, formation and development of China's old eight famous wines,
19	Guichi Tea Factory	Guichi District, Chizhou City, Anhui Province	A group of 1950's zigzag-shaped workshops, Warehouse, manual picking plant, refined tea workshop, wooden production line, blending workshop, foreign trade warehouse, packaging workshop, Office building, Qihong processing and training field, home of employees; historical archives.	Guichi Tea Factory was established in 1951 and is the only large-scale production enterprise of Qimen black tea that has maintained an uninterrupted heritage for 68 years in China. It is a banner of the tea industry, creating a new historical era in the industrialization and standardized production of Qimen black tea. It was listed in the Second batch of Chinese 20th
				Century Architectural Heritage
20	Huangshan Shexian Laohu Kaiwen Ink Factory	Yi County, Huangshan City, Anhui Province	Production workshops, ancient cigarette lighter workshops, office buildings, staff dormitories; ink presses, agitators, and other ink production equipment, 10 sets of molds (ten immortals) produced during the Qing dynasty; historical archives.	"Huizhou Hu Kaiwen" has a history of more than 200 years. The whole factory has more than ten production processes such as carving molds, cigarette lighting, ink making, ink drying, polishing, and gold drawing, and a well-equipped physical and chemical inspection center for ink ingots. It gathers all the technical equipment and ancestral recipes of famous artists to make Huimo, and has more than 7,800 varieties of precious ink molds created

				and carved by famous masters in the Ming and Qing dynasties.
21	Yuanhetang Candied Fruit Factory	Licheng District, Quanzhou City, Fujian Province	Pool for the fruit preservation, honey workshop, boiler rooms, beverage production workshop, sugar building (including rock sugar workshop and preserved ground), white sugar warehouse, packaging workshop and finished product warehouse, factory gate, office buildings, administrative offices, staff canteens; candied juice concentration tank, candied juice mixer, mixing stick, drying spoon, candied preserved jar, drying dustpan; historical photos.	The site has strong historical and cultural value, it represents a trademark for the Chinese food industry. It is now a touristic site after the opening of the creative industrial park.
22	Fujian Hongqi Machinery Factory	Changting County, Longyan City, Fujian Province	Factory buildings, office buildings, auditoriums, dormitories, shops, canteens, bathhouses, hospitals, kindergarten, schools, light courts.	The site is a secret arsenal in the gorge of Dongyang Mountain which once produced anti-aircraft machine guns and other weapons bringing their families to this remote mountain and old forest to support the country's construction.
23	Jingdezhen Imperial Kiln Factory Site	Zhushan District, Jingdezhen City, Jiangxi Province	Remains of the kiln industry belonging to the Ming and Qing Dynasties (including kiln relics and workshop relics), wall, road relics, ancient wells, ancient trees, kiln industry relics, buildings and other auxiliary building relics. Related Yuan Dynasty Kiln Ruins, Unearthed Imperial Kiln Relics.	The imperial kiln was a royal porcelain factory dedicated to firing and enshrining porcelain in the Ming and Qing dynasties. It is the government-run kiln factory with the longest firing time, the largest scale and the most exquisite craftsmanship in China. In March 2015, Jingdezhen City officially launched the declaration of World Cultural Heritage with the ruins of the Imperial Kiln Factory as the core.
24	Jingdezhen State-owned Weimin	Zhushan District, Jingdezhen	Raw material workshop, forming workshops, cutter workshop, color painting	In the late 1960 the factory was designated as one of the main manufacturers of

	Porcelain Factory	City, Jiangxi Province	workshop, roller kilns, safflower warehouse, inverted flame kiln workshop, tunnel kiln workshop, finished product warehouse, power distribution workshop, model workshop, boiler room, factory gate, administrative office building, labor union building, staff canteen, screening room, chimney, Taihu stone; generators, grinding wheels, bell mouths, funnels and other production tools; old photos, certificates, books and other historical archives.	export porcelain.
25	Jizhou Kiln Site	Ji'an County, Ji'an City, Jiangxi Province	Long kiln site of Benjue Temple, Mao'anling site, Danshadu ancient wharf site; 24 ancient kiln bags; unearthed cultural relics such as Konoha Tianmu lamp, paper-cut decals, painted porcelain, etc.; Jizhou kiln sagger ancient road, porcelain workshop.	Founded in Tang Dynasty and re-founded by British in 1937. In 2001 Jizhou Kiln site was listed by the State Council of the People's Republic of China and announced as part of the fifth batch of national key cultural relics protection units
26	Xingguo Guantian Central Arsenal	Xingguo County, Ganzhou City, Jiangxi Province	The former site of the General Affairs Section (factory), the former site of the ammunition department, the former site of the gun department, the former site of Litieke, the former site of the club, the former site of the special service company, original lathes and other production equipment, historical archives.	In 2001, it was announced as a national patriotic education demonstration base and in 2006, it was listed in the sixth place by the State Council. Approval of national key cultural relics protection units.
27	Weifang Daying Tobacco Company	Kuiwen District, Weifang City, Shandong Province	Tobacco rebaking workshop, East Xiaoyang Building, West Xiaoyang Building, Tenthouse, Tobacco Stores, Warehouses, Pallet Base, water storage for industry and fire pond, about six kilometers of tunnels, historical archive.	The former site of the British Tobacco Company, , is the earliest, largest, and most well-preserved tobacco plant site in China.
28	Dong'e Ejiao Plant No. 78 Site	Dong'a County, Liaocheng	Raw material processing workshop, Ejiao production building, syrup production	It is one of the most representative traditional Chinese medicine industries

		City, Shandong Province	building, freezing station, glue- rubber packaging building, compound Ejiao production workshop, warehouse building, comprehensive office building; steam ball skinning machine, foot-cut plastic machines, plastic cutting machine, small capper, packing machine, decanters, production equipment, tools, 1966 East Azerbaijan licensing of trademark registration and other historical archives	in China.
29	Hubei 5133 Factory	Laohekou City, Xiangyang City, Hubei Province	Construction headquarters, office buildings, workshops, special railway line, workers club, guest house, ice rink, basketball court; lathes and machine tools, gear shaper, circular engraving machine, shear plate machine, long engraving machine, projector, light section microscope.	It is the birthplace of China's first rocket launcher and is an important Chinese military industrial enterprise.
30	Huaxin Cement Plant Site	Huangshi Port District, Huangshi City, Hubei Province	Unloading pit, combined storage, thick slurry tank, slurry storage tank, wet-process rotary kiln, cement storage, packaging workshop	Th site has been selected for the first batch of China's 20th Century Architectural Heritage
31	China Nuclear Power Plant 272	Zhuhui District, Hengyang City, Hunan Province	Old uranium purification production line, uranium hydrometallurgy production line, uranium tailings depot, special railway line and steam locomotive, antiaircraft gun, riverside pump room.	It was one of the 156 key projects jointly planned with the former Soviet Union during China's "First Five-Year Plan" period.
32	Nanfeng Ancient Stove	Chancheng District, Foshan City, Guangdong	Main structure of long kiln (including foundation, kiln head, kiln room, kiln tail, kiln shed and chimneys).	The Nanfeng ancient stove is one of the fifth batch of national key cultural relics protection unit.
		Province		It is listed in the Guinness Book of World Records as the "oldest firewood-fired dragon kiln that has been continuously used so far".

33	816 Underground Nuclear Plant	Fuling District, Chongqing	Recycling machinery processing plant, supporting water intake and water making equipment, dormitory and staff living area, cemetery of martyrs; historical archives.	Included in the Second Batch of Chinese 20th Century Architectural Heritage. In 2019, it was rated as a national AAAA-level touristic site.
34	Chongqing Changfeng Chemical Plant	Changshou District, Chongqing	Phosgene synthesis production line, medium stabilizer production line, workers club, dormitory and staff canteen, water tower; historical archives.	It represented a military supporting enterprise during the third-line construction period in the 1960s.
35	Shuijing Street Winery	Jinjiang District, Chengdu City, Sichuan Province	"T" structure wine production workshop, drying hall,old cellars, new cellars, stove pit, condenser base for distillation equipment, pillar foundations	The discovery of the winery site reveals the entire process of winemaking in the Ming and Qing dynasties.
36	Zigong Well salt site	Gongjing District, Daan District, Zigong City, Sichuan Province	The site is composed by: Dongyuan Well; Shenhai Well; Da'an Salt Factory. Both the Dongyuan Well and Shenhai Well Sites have well preserved the layout and features of the well salt production in the Qing Dynasty (19th century) and preserved the constructions such as garages, turrets, overhead cranes, carts, and basins for salt production. Dongyuan well: mine, wooden derrick, well hat, hoe, smoke lane, mortuary, slurry room, locomotive room, large garage, small garage, salt pan workshop, floor frame; floor roller, sky roller, Locomotive, wooden cart, manger roller, big wooden bucket, core stone gas channel. Shenhai Well: mortuary and well-drilling equipment and wellhead, large garage and winch room, stove room and salt-making facility equipment, cabinet room, salt Warehouse;	Historically, Zigong City in Sichuan Province is known for its rich well salt, Zigong has been mining well salt for 2000 years. Among them, Dongyuan Well is the world's first ultra-thousandmeter deep well, with a mining time of more than 200 years. The raw materials of mine salt are all collected from natural brine and rock salt deposits in the Jurassic geological age below a kilometer deep well, which is rich in various natural minerals. In 2006, the Zigong Well Salt Deep Drilling technique was approved by the State Council to be included in the first batch of national intangible cultural heritage lists.

			crane, cart, stern tube, stern bucket, smoke lane, drying station. Da'an salt factory: Vacuum salt production main plant and vacuum salt production equipment, hot water pool, storage warehouse, soft water room, salt warehouse, white water pump room, water tower, wave steel tower, salt conveying belt channel, sedimentation tank.	
37	Panzhihua Iron and Steel Plant	East District, Panzhihua City, Sichuan Province	Zhujiabaobao Iron Mine (including the blast site), Nongnongping main plant industrial complex, Dukou Shipyard dock and wharf; Panzhihua Iron and Steel No. 1 blast furnace, vanadium extraction and steelmaking Plant, converter, steam turbine blower unit, electric locomotive	The construction of the Panzhihua Iron and Steel Plant is an important strategic decision made by the Party Central Committee. The site was personally followed by Mao Zedong's decision and Zhou Enlai's command, this allowed to the large-scale construction of the Panzhihua Iron and Steel Plant, the first large plant in western China.
38	Dongwo Hydropower Station	Longmatan District, Chuzhou City, Sichuan Province	Barrage, diversion canal, factory building; generator set; "Shexian Jihe Hydroelectric Power Plant Co., Ltd. business project two explanation form".	It is the second hydropower station built in mainland China and the first hydropower station designed and constructed by the Chinese experts.
39	Longchang Gas Mine Shengdengsh an Gas Field Site	Neijiang	Long wells, carbon black workshop office, carbon black fire room ruins, carbon black laboratory, Longchang gas mine office buildings, transmission workshop and workers' lounge, Yuejin auditorium, Longchang gas mine guest house; bottles of the 150's carbon black products, bottles of sulfur recovered in the carbon black workshop, footstone of the carbon black fire room, 1 set of fire mouth; "Geological Research Report	The only oil company that the chairman has ever inspected in his life

			of Shengdengshan Gas Field in Longchang (Dec. 1964)"; historical archives such as natural gas tank carbon black production process design drawings.	
40	Former controlled nuclear fusion experiment site	Shizhong District, Leshan City, Sichuan Province	Main heavy engine hall, control room, motor building, engineering laboratory, rectification building, 303 hall, the main workshop of the experimental factory and machining equipment; China Circulator No. 1 experimental device, anti-field pinch ring experimental device, Pre-tested circulator experimental device, micro-circulator experimental device, micro-circulator experimental device; archives of academician Li Zhengwu, donated books and handpainted manuscripts by Mr. He Chengxun.	This is the site of the first controlled nuclear fusion experimental device, the earliest in China and the largest in Asia at the time. Scientists have made more than 5,000 scientific and technological achievements here, built 19 other types of controlled nuclear fusion devices, and gave birth to a number of international and domestic advanced science and technology.
41	Jiayang Coal Mine	Liwei County, Left City, Sichuan Province	Huangcun well, administrative office building, auditorium, expert buildings, miners row houses, narrow gauge railway; steam locomotive heads.	In 1938, a Sino-British joint venture opened the Jiayang Coal Mine. The mine used advanced equipment and technical personnel from the Sino-British joint venture. The coal mined was mainly shipped to Chongqing for smelting iron and steel, which had made great contributions to the victory of the Anti-Japanese War.
42	Liuzhi Mining Area	Liuzhi Special Zone, Liupanshui City, Guizhou Province	Coal Preparation Plant's original coal transportation corridor, loading/unloading coal bunker, washing workshop, coal mine main shaft, staff bathhouse; Liuzhi coal mine main shaft and auxiliary shaft, Sijiaotian coal mine main shaft, production company team office area, forging workshop, tube building, housing for workers, staff canteen, Soviet-style office building and auditorium;	Liuzhi Coal Mine and Dizong Coal Mine have summarized and refined the "four-in-one" coal and gas outburst prevention and control technology during more than 10 years of production, and won the second prize of scientific and technological progress from the Ministry of Coal Industry and the Ministry of Energy.

			dedicated Railway Line and bridge, wood-framed platform of general material warehouse, warehouse for fireworks, old factory building of Liuzhi Power Plant, dust removal facilities.	
43	Guizhou mercury mine	Wanft District, Tongren City, Guizhou Province	Heizizi, Xianrendong, Yunnan Ladder Pass, 300-ton machine dressing plant, smelter smelting furnace workshop, Guizhou mercury mine science and cultural center, auditorium, Soviet expert building, Wanft Special Zone store, hospital clinic building, labor service Center, technical school, staff canteen, department store, cinema, food store.	Thanks to a set of advanced mining processes, beneficiation and smelting technologies this site represents the embodiment of the history of China's mercury mining.
44	Fengqing Tea Old Factory	Fengqing County, Lincang City, Yunnan Province	Soviet-style building offices, Feng Shaoqiu (founder) bronze statue, dryings, finished products, box making, packaging workshops, warehouses; railroad tracks; low-speed diesel generator imported from Germany, Jiefang fire truck purchased in 1975; refined tea production line, sets of wooden homogenizers, wind separator; three-barrel hand kneading machine, tea pedal and power tea maker, tea pedal and power tea maker designed by Mr. Feng Shaoqiu; historical photos.	founder Mr. Feng Shaoqiu in March 1939. It is the birthplace of the famous
45	Yangbajing Geothermal Power plant	Dangxiong County, Lhasa, Tibet	Test machine workshop; steam turbine, turbo-generator, driving, expansion vessel, condenser, water jet extractor, water pump, switchboard.	In 1975, the central government listed the Yangbajing geothermal development as a key project of the national "Fifth Five-Year Plan".
46	Hongguangg ou Aerospace Sixth Academy	Feng County, Baoji City, Shaanxi Province	Scientific research building, confidential room, administrative logistics building, mechanics laboratory, small pump laboratory, Zhang	This was the only aerospace power research and development base during the third-line construction period in my country.

			Guitian's home, expert buildings in scientific research area, Red Light Workers Club, headquarters office buildings, auditoriums, guest houses; drawings, historical archives and vocal historical records.	
47	Pucheng National Time Service Center, Chinese Academy of Sciences	Pucheng County, Weinan City, Shaanxi Province	Shortwave service station broadcasting hall, longwave service station underground broadcasting hall; shortwave transmitter and auxiliary equipment, longwave transmitter and auxiliary equipment; four tower inverted cone longwave transmitting antenna	This site is representative of the very beginning of modern China's radio transmissions.
48	Dingbian Saltworks	Dingbian County, Yulin City, Shaanxi Province	Gouchi salt lake and salt pans, salt pans and lodging sites of the 359th brigade, salt lake flood dam ruins of the 359th brigade, office buildings of the Dingbian salt chemical plant; salt tanks, weighing mound.	Dingbian County, Shaanxi Province, has a long history of salt production. It began in the Qin and Han Dynasties, prospered in the Sui and Tang Dynasties, and flourished in the Ming and Qing Dynasties. Dingbian was also called "Yanzhou" the land of the salt, in ancient times.
49	China 504 Nuclear Plant	Xigu District, Lanzhou City, Gansu Province	Soviet style workers building, Hexin pumping station, Yellow River Iron bridge, ruins of the old master craft hall; first prize medal and certificate of merit of National Science and Technology Progress Award (1978), historical pictures.	In 1958, Deng Xiaoping approved the "Five plants and three mines" plan and decided to build China's first enriched uranium production plant in Lanzhou to provide important nuclear fuel for China's first atomic bomb. China Nuclear Plant 504, is the first uranium enrichment plant in China.

3.2.5 Fourth Batch of National Industrial Heritage List. December 2020

On April 1st 2020, The Ministry of Industry and Information Technology published the "Notice on carrying out the Fourth Batch of National Industrial Heritage Recognition and Application" (MIIT, 2020, letter n. 68). The document invites the local ministerial authorities and the enterprises 'owners to strengthen the protection and utilization of industrial heritage and the inherit China's industrial spirit, to promote excellent industrial culture, in accordance with the requirements of the *Interim Measures for the Administration of National Industrial Heritage*" trough the participation to the identification work of the fourth batch of national industrial heritage sites.

The document recalls to the procedure ruled by the *Interim Measures* specifying that the identified sites should mainly include: workshops, warehouses, mining areas and other production and transportation facilities built before 1980, as well as other industrial-related social activity sites. The notice remembers the values which the sites should have to be candidate as national industrial heritage: 1. symbolic significance in Chinese history or industry history; 2. being representatives of technological innovations in a certain industry, region or historical period, having an important impact on scientific and technological development of the country and having high scientific and technological value; 3. having rich industrial cultural connotation being representatives of life style of their times detaining a high social value; 4. having in their historical remains an important architectonical and artistic value, being representatives of the industrial style of a specific historical period or region. The document continues, recalling the general legal framework of the *Interim Measures*, remembering the application procedure ¹⁸ and specifying that every local administration agency should not apply for more than two sites.

^{18 (1)} Apply for the national industrial heritage according to the territorial principle. The owner of the heritage is the main body of the declaration, fill in the "National Industrial Heritage Application" and submit it to the province, autonomous region, municipality directly under the Central Government and the city under separate state planning after reporting to the local county-level or city-level industrial and information technology department for approval from the people's government at the same level, Xinjiang Production and Construction Corps Industry and Information Technology Department (hereinafter referred to as the provincial competent department) to apply. The relevant central enterprises directly apply to the headquarters of the group company.

⁽²⁾ The provincial competent department and the headquarters of the relevant central enterprise group companies are responsible for organizing the review of the application materials, clarifying the recommendation order, and selecting the best to determine the recommendation list.

⁽³⁾ The number recommended by each province, autonomous region, and municipality directly under the Central Government shall not exceed 5, and the number recommended by cities under separate state planning, Xinjiang Production and Construction Corps, and relevant central enterprises shall not exceed 2.

The notice closes reminding the submission requirements ¹⁹ specifying that the candidatures have to be submitted before June 10th 2020. Following this notice, on 17th December 2020, the Fourth Batch of national industrial heritage lists was announced by the Ministry of Industry and Information letter n. 68 (MIIT, 2020, 348). The sites listed are presented by the following table [Table 3.4].

Table 3.4 Fourth Batch of National Industrial Heritage List

Serial number	Name	Address	Main Industrial remains	Notes on heritage values
1	Beijing Telegra ph Buildin g	Beijing City Xicheng district	Beijing Telegraph Building; Model 7512 (C) Tube Radio Transceiver, Model BD055 Teletypewriter, Telegraph Delivery Motorcycle; Beijing Telegraph Bureau Plaque, Transistor Electronic Billing Equipment Procedure Operation Table, 1952 Edition "Standard Telegraph Book", Beijing Telegraph office business day stamp and business hours card, old photos from the 1950s to the 1980s.	
2	Seagull Watch Industry	Binhai New District, Tianjin	Gear hobbing machine, vertical milling machine, small lathe, four-station milling machine, automatic lathe, precision punching machine, high-precision multi-station machine tool, measuring instrument, precision wire cutting machine; "Five Star" watch (1955), "Wuyi Watch" (1957), tuning fork electronic watch (1965), "304" aviation chronograph (1966), "Dongfeng watch" (1966), "Seagull" watch (1973), female watch (1975); The watchmaking tools used by the technician Wang Cimin, measuring	First China's watch and clock production factory.

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^{19 1)} Provincial competent departments and central enterprises should strengthen organizational leadership, dig deep into industrial heritage resources, and actively organize relevant heritage owners to do a good job in declaration work. The number of selections should be strictly controlled, and a group of outstanding projects with strong representation and high protection and utilization value should be recommended according to the priority order. Industrial heritage projects along the Grand Canal and old industrial cities are recommended first; (2) Please submit the recommended documents and application materials (in triplicate for the paper version and one U-disk for the electronic version) to the Ministry of Industry and Information Technology (Department of Industrial Policy and Regulations) before June 10, 2020; (3) The Ministry of Industry and Information Technology will entrust a professional organization to review the application, and announce it to the public after review, publicity and approval.

			calipers, file tweezers, and various watch case back cover wrenches; file information; main workshop building, clock tower, water tower, expert building; universal engraving machine, single-needle shrink machine, hand gravure printing machine	
3	Tianjin Third Cotton Textile Factory	Hedong District, Tianjin	Spinning mills, cloth mills, machine repair shop, foundry shop, power plant, integrated office building, warehouse three-phase alternator, Toyota loom, roving machine, vertical opener, Jacquard loom; file information.	Since the establishment of the two spinning mills, they have been using the most advanced technology and machinery at the time, which greatly increased their productivity and promoted the production and development of the textile industry. The founder introduced the 8-hours work day. The original factory structure is well preserved and represents a distinctive modern industrial architecture, mostly brick-concrete and frame structure, it has a great architectonic value.
4	Zhangji akou Shachen g Winery	Huailai County, Zhangjiako u City, Hebei City	Wine workshop, 197 wine fermentation and storage tanks, wine laboratory, shelf balance, dual electric stove, ion exchanger, gas chromatograph, incubator, purification bench and other wine inspection experimental equipment, new dry white wine technology; 7 liquor brewing workshops, 150 liquor brewing cellars, 10,000-ton underground wine storage, 60 wine storage pots, Shacheng old cellar wine brewing skills; archive information.	Shacheng wine has a long history. According to historical records, in the early Ming Dynasty, Shacheng was already a wine-producing resort outside the Great Wall, with a history of more than 600 years. The Zhangjiakou Shacheng Winery represents a pioneer factory for the national wine production industry having developed the first red and the first white Chinese wines.
5	Ruins of Liu Lingzui' s	Xushui District, Baoding City, Hebei	Ancient wells belonging to the Song Dynasty, relics of the stoves, charcoal pits, wall foundations dating to the Jin and Yuan Dynasties, 16 ancient pits	Archaeological excavations show that the distillery in Xushui County existed before the Song Dynasty.

Province Burning built in the early Jin Dynasty, 165 In 1948, the modern site was Pot ancient pits built in the Ming and Qing built on the basis of the old dynasties; wooden wine storage sea burning pot wine, inheriting built in the Qing Dynasty, 43 Jingbian the ancient burning pot and wine sea made in the Qing Dynasty. traditional craftsmanship, the site continued the liquor production becoming the modern Liulingzui burning pot wine making. The company was founded 6 Fenjiu Dynasty old workshops Fenyang Oing old City, (including 20 ancient houses, 2 in July 1948 and it was the worksh Luliang ancient wells, 150 fermentation first publicly-owned winery City, Shanxi in New China. In more than op and tanks), 3 winery workshops, readytradition Province made workshops, 2 wine warehouses, 70 years of development, office building of the first winery Fenjiu has always led the winery factory, historical archives, Fen development Distillery Club, "Jiu Ruquan" gate; innovation of China's liquor area production equipment from 1920s to industry and has witnessed 1950s. the glory and achievements of China's liquor industry. The company inherited the production structures belonging to the Qing Dynasty and continues to use them. This industrial heritage completely and clearly shows the formation and development of Chinese winemaking. 7 Laolongkou Winery has a Laolong Dadong "Laolongkou" ancient well, 1662 "Laolongkou" ancient cellar pool, old rich historical and cultural kou District. aging workshop, old wine workshop, heritage values. It is the Winery Shenyang City, condiment wine brewing workshop: 5 oldest and only existing stone mills in the late Ming and early Liaoning national enterprise in Qing dynasties, wood wine sea and Province Northeast China that uses Qing Dynasty wine sea fragments, original site and Japanese storage Wine copper cans, production structures to wooden distiller cover, mechanized continue to make Chinese distiller: old trademark liquor. "Laolongkou" sorghum liquor, 58 years of trademark registration certificate of "Laolongkou Daqu liquor", photos of wooden distiller in Yilongquan account book, photos. 8 South dock for ship repair, supporting Dalian Shipyard is one of Dalian Xigang District. pump room and water pump. earliest industrial Shipvar Dalian City, buildings in Dalian d Liaoning reflecting the architectural Province style and level of Dalian at

				the beginning of its establishment. The South Dock of ship repairing condenses more than 100 years of China's shipbuilding industry.
9	Fuxin coal industri al heritage group	Haizhou District and Xinqiu District Fuxin City, Liaoning Province	Xinqiu coalfield site, Haizhou mine pit, Fuxin mass grave site, Pingan Coal Mine Workers Club; single bucket excavator, bulldozing plough, electric locomotive, steam locomotive.	It was a "First Five-Year Plan" important project, four of the 156 key construction projects nationwide were deployed in Fuxin. It was the largest open-pit mine in Asia at that time and China's first modernized, mechanized and electrified open-pit mine.
10	Change hun Film Studio	Chaoyang District, Changchun City, Jilin Province	Hybrid recording studio, third studio, recording studios, printing workshop, screening rooms, Changying main office building, factory gate, Chairman Mao statue; 42 sets of equipment for film development, light distribution, polishing, editing, reduction equipment; archive materials (1949-1980), architectural design records for the main building of the Puppet Manchurian Film Festival, 5000 films, props and costumes for movies such as "Heroes and Children", "Liu Sanjie", "The Queen Mother of Two Palaces"	It is the first film studio of modern China.
11	Jiapigou Gold Mine	Huadian City, Jilin City, Jilin Province	Honggou Putiangai original mine, Xiaxitai mine, Sandaocha mine, Soviet-style office building, production scheduling office building, Dongfenglou apartment, Soviet-style employee cinema, Laoniugou bunker; transformer unit, 1945's gold panning tool.	With almost two centuries of history, it was once the largest gold mine in the country. It is famous for its high-quality gold and is known as the cradle of China's non-ferrous metal industry.
12	Harbin Cigarett e Factory	Nangang District, Harbin City, Heilongjian g Province	Original early XXC. factory building, house for guards, hand-cranked shredder, Mike Old Barduo's desk (founder); 50 degrees Celsius high temperature fermentation method data (1950s), Old photos of the factory workshop (1922). Melting and casting	The Harbin Cigarette Factory was founded in 1902, the founder is the Russian-Polish Karaim Old Barduo. The company can be traced back to the Old Barduo Tobacco Factory

			branch, rolling plate, extrusion branch, central laboratory, old office building, cultural palace, 2000mm hot rolling mill.	founded in Moscow in 1898. The factory is the most long-lasting Chinese cigarette industrial enterprise.
13	Northea st Light Alloy Processi ng Plant	Pingfang District, Harbin City, Heilongjian g Province	Melting and casting branch, rolling plate, extrusion branch, 201 central laboratory, old office building, cultural palace; hot rolling mill	China's largest aluminum- magnesium alloy processing
14	Harbin Electric -motor Factory	Xiangfang District, Harbin City, Heilongjian g Province	Large hydropower plant and automobile power plant, medium plant, coil plant, main building, office building, front entrance of the large electrical machinery research institute; vertical lathe and horizontal lathe.	The 60-year development history of the enterprise has created countless "firsts" in the history of China's power generation equipment manufacturing.
15	Harbin Boiler Factory	Xiangfang District, Harbin City, Heilongjian g Province	Main workshop, the original office building; pipe bender, hydraulic press.	Harbin Boiler Factory is the first modern power station boiler R&D and manufacturing plant built in China. It was developed with the help of the Soviet Union and it represents the starting point for the development of power station boilers of the country.
16	Beiman Special Steel compan y	Qiqihaer city, Heilongjian g Province Fulaerji District	The three old office building, the central laboratory and the cultural palace are well preserved and represents the core items of the national industrial heritage.	It was one of the 156 key projects in China's first five-year plan.
17	Great Norther n Telegra ph Bureau	Huangpu District, Shanghai	1920's Office Building, floor guide; bronze statue of Shi Wensheng, copper signboard of Great Northern Telegraph Company; original 1897 telegraph, watercolor architectonical project of the Great Northern Telegraph building, original copy of the "Telegram Books".	The telecommunications institution of Denmark, Norway, United Kingdom, Russia and other foreigner countries was established in 1869. The telecommunications company was the first foreign company to lay submarine cables in China, to found the earliest telecommunications institutions in Shanghai, to

				establish the first telegraph line in China and the international telegraph network in the Far East with Shanghai as the center.
	Yun-10 aircraft	Pudong New Area, Shanghai	Yun-10 aircraft; 1282 boxes of archive materials such as documents, drawings, flight test documents, , photo albums, etc.	Yun-10 aircraft created "three firsts": the first domestic jet passenger aircraft, the first domestic transport aircraf and the first domestic aircraft designed in accordance with British and American airworthiness regulations. The successful development of the Yun-10 aircraft has filled the Chinese gap in civil aviation industry.
19	Changz hou Daming Yarn Factory	Changzhou Economic Developme nt Zone, Jiangsu Province	Spinning machine workshop, machine repair workshop, warehouse, torch-shaped brick water tower, laboratory, measurement room, Liu Guojun (founder) furnished office, office building, business center office area, executive and guest accommodation area, dormitory, bathroom, dining hall; spinning frame, type cotton cleaners; bookcases used by for public-private partnership agreement, company rules and regulations, business transaction vouchers, personnel files, drawings, manuscripts, etc.	On September 21, 1954, Mr. Liu Guojun signed the "Public-Private Joint Venture Agreement" with the Industrial Bureau of Changzhou People's Government. In 1966, it was renamed as "State-owned Changzhou Fourth Cotton Textile Factory". In 1969 it successfully realized the trial spinning trial of "Zhengliang" (polyester fabric) and the company was one of the first major domestic enterprises to produce "Qingliang" polyester cotton. It was one of the 156 national project of the first "Five-years plan".
20	Shuang gou Old Pits and Winery Worksh ops	Sihong County, Suqian City, Jiangsu Province	Old cellar pools, Song and Yuan Dynasties winemaking sites, old winemaking workshops, the first mechanized winemaking workshop, a bulk wine warehouse and underground large-capacity wine storage; "Gouliquan" calligraphy, archive.	Shuanggou wine industry started in the Sui and Tang Dynasties, developed in the Song and Yuan Dynasties, prospered in the Ming and Qing Dynasties. The Shuanggou Laojiao Pool Group and the distillation workshop were built in 1385 wich is still well-preserved.

						The venue is an inphysical carrier of wine culture.	
21	Shanlia n Lake Pen Factory	Nanxun District, Huzhou City, Zhejiang Province	worksho office an machine lathe se	basin workshopp, warehouse, a rea; pole cutter, le, lettering matts, pen connectrush abrasion res	dministrative hair combing achine, horn tion fastness	"Shanlian Lake famous for the natradition of Chine making. It has a lonand craftsmanship. It is as the best in the w	nillennial ese brush ng history exquisite es known
22	Lujiang Alum Mine	Lujiang County, Hefei City, Anhui Province	auxiliary crystalli brothel, miners Hospital mining archives		ed building, street, alum ine Workers' ker Village; equipment;	The mainstay of industry, the modern Anhui chemical is together with the alum mine is know country's largest capital.	other of ndustry", Wenzhou vn as the
23	Kouzi old pits and winery worksh ops	Suixi County, Huaibei City, Anhui Province	Ming a warehou making wagons,	on Workshop, and Qing Dyn use; production to such as pots, w	asties' wine cools for wine cheelbarrows, s, scouring	The Kouzi complex has a lon and carries the technology that he passed down for the of years in Suixi.	ancient nas been
24	China Aerospa ce 603 Base	Guangde City, Xuancheng City, Anhui Province	_	cket launcher, sou testing plant No.	•		in July unched a M main weather A weather et) and 1 ploration piological om the T- ng many story of
25	Anqing Hu Yumei sauce and pickle factory	Daguan District and Yingjiang District Anqing City, Anhui Province	drying s jar, soy dormitor Dynasty	rewing room, versauce area, trad sauce production, a stone hoop building, Hurdepartment	itional sauce on line, staff gate of Qing	The site has more years of industria and represents historical and values in the Chinese culinary in	l history high cultural field of
26	Fujian	Mawei	Fujian	Shipbuilding	Buildings"	In 1866 the Qir	ng court
	-						

	Shippin g Admini stration building	District, Fuzhou, Fujian Province	(Marine Engine Factory, Painting Academy, Guanting Pond, No. 1 Dock, Bell Tower), Maqian Mountain Plum Garden Building, settlements of shipping workers in the old streets of Mawei, the French Catholic Church, the Tianhou Palace of Shipping, as well as the movable cultural relics that have been collected by various museums and memorials.	chose the site of Mawei Port in Fuzhou to establish Fujian Shipping Administration, introducing advanced Western shipbuilding technology and cultivating China's first generation of naval personnel. The founding of Shipping Administration promoted the development of modern Chinese industrial economy and social transformation. In the decades since the establishment of Fujian Shipbuilding, there have been more than 50 firsts in the history of modern Chinese industry becaming the pioneer of modern China's shipbuilding industry and aviation industry.
27	Anxi Tea Factory	Anxi County, Quanzhou City, Fujian Province	Screening workshop, smoke-free stove, oolong tea refined assembly line, small packaging workshop, Maocha warehouse, office building, dormitory, air-raid shelter; charcoal and electric dual-purpose drying oven, milling machine, suspension rod type circular screen machine; "Oolong Tea Refining Process Procedure" license, factory Workers' Wages, labor insurance, welfare, and reward expenditure measures" and other archive materials.	Anxi Tea Factory is the first enterprise in the oolong tea refinement and processing industry to realize mechanized production, establish the oolong tea standard, the earliest self-export right, and the only product to win the national gold medal. It is an old-brand key export enterprise in the tea industry and a key leading enterprise which has made outstanding contributions to the development of China's modern industry.
28	Hongdu Machin ery Factory	Qingyunpu District, Nanchang City, Jiangxi Province	Aircraft assembly factory and Ministry assembly factory, standard parts factory (octagonal pavilion), physical and chemical center, equipment maintenance factory, clamp welding hydraulic accessory factory, heat meter factory painting section, flight test station hangar, 3	Part of the 156 key national project of the First Five-years plan, the aircraft factory has made outstanding contributions to the development of China's aviation technology and industry.

			warehouses of logistics distribution center, cooling tower (power center), old flight control building, new flight control building (test flight station), office buildings.	
29	Jiangxi Xinghu o Chemic al Plant	Yuanxiu County, Jiujiang City, Jiangxi Province	Xinghuo division unsymmetrical dimethyl hydrazine production area: power workshop, unsymmetrical dimethyl hydrazine workshop, electrolysis workshop, electric instrument workshop; Xinghuo division silicone production area: methyl chloride workshop, organic silicon synthesis workshop, chlorinated polyethylene workshop, machine repair workshops, organic silicon product deep processing workshops, infrastructure workshops; production gates, employee housing, union clubs, cinemas, canteens, hospitals, guest houses, shopping centers, banks, youth homes, police stations, schools; Liaoyuan branch production site, archives.	It is a key defense national chemical unit and new chemical material manufacturer.
30	Ruins of the Tonglin g Copper Mine	Ruichang City, Jiujiang City, Jiangxi	Ancient mining area, beneficiation area, smelting area, living area; copper adze, copper chisel, wooden axe, wooden adz Tao Zhu, Tao Ding, Tao Dou and other utensils	In 2001 was listed in the Fifth National Key Cultural Relics Protection Units and in 2007 was Included in the preliminary list of China's World Cultural Heritage. Is one of the symbols of
31	Jingdez hen State- owned Jianguo Porcelai n Factory	Zhushan District, Jingdezhen City, Jiangxi Province	The blank houses of the Ming and Qing kilns, the brick and wood production blanks of the kiln brick walls, the manual molding workshop, the press molding workshop (including the daily porcelain workshop), the drying pond, the smelting workshop (the old Luohandu Kiln), 60-meter-high blue brick chimney, porcelain selection and packaging workshop, Xujiayao, boiler room, square chimney, old kiln brick, bluestone paving roadway, administrative office building, workshop office building, surrounding residential buildings;	Chinese bronze civilization The predecessor of Jingdezhen Jianguo Porcelain Factory was the Ming and Qing imperial imperial kiln factories. In August 1949, the Fuliang Prefectural Committee of the Communist Party of China decided to build a state-owned porcelain factory from the confiscated former Jiangxi Porcelain Company and change its sales office to an office site. While producing civil porcelain, the company was the first to undertake the

			archives	task of using porcelain for the country and the provincial committee.
32	Jinan Railway Bureau, Jinan Machin e Factory	Shizhong District, Jinan City, Shandong Province	The office building of the German factory director Doug Milli and a villa for senior managers, pavilion, water towers, oil depots, the site of the party branch and labor union; the old dormitory apartment area; early use of German steel rails and domestic steel rails. 1911 Hanyang steel rails and steam locomotive produced by the factory; archive.	The site has a great architectonical value, representing an early sample of the XX century industrial architecture. It has very important historical, artistic and scientific value.
33	Jinan Post Office	Huaiyin District, Jinan City, Shandong Province	The building is representative of the early Western XX century style (1918). The architects are from the Tianjin Foreign Architects Office. Buildings on the old site of the Shandong Provincial Post and Telecommunications Administration; Shanghai Yangu submarine communication cable, a magnet common-electric manual telephone switch from the 1940s to the 1970s, a 20th century telegraph transmitter, carrier telegraph, portable 10-door switch, Japanese-style nine Two-type telephone, wooden plaque of "Dengzhou Prefecture Letter Bureau"; a set of 10 stamps issued by Germany in Qingdao in the late Qing Dynasty, and 15 stamps of Chairman Mao's portrait of the second edition of the Shandong Liberated Area.	High historical and architectonical values. Key cultural unit.
34	Guojing Paojing Cellar Group and wine worksh op	Gaoqing County, Zibo City, Shandong Province	Pull down well and well cellar brewing workshop, round well cellar, cellar pool, Ming and Qing wine storage cellar site, site of bran yeast brewing and fermentation workshop; 26 wooden wine seas, wine storage of the late Qing Dynasty, 650 pottery altars belonging to the 20's; the gold medal of the Panama International Fair (1915) and other archive materials.	Shandong Gaoqing has a long history of wine making. A large number of wine relics from the Dawenkou period to the Western Zhou period have been unearthed. In 1957, the Gaoqing County Government took Xianglong Winery and gathered craftsmen and utensils from private wineries such to establish a

				state-owned Winery. The company has organized and inherited the brewing skills of "Kidoujing Liquor" handed down since the Song Dynasty.
35	The meritori ous well of Shengli oilfield	Dongying District, Dongying City, Shandong	Huaba Well, Ying Er Well, Tuo Eleven Well; historical pictures and other archive materials.	The site has important historical, social and technological value for the development of China's petroleum industry.
36	Shando ng Jingzhi Wine Industry	Anqiu City, Weifang City, Shandong Province	South school field cooking pot site, Jingzhi Baigan workshop, cellars, mechanized Baigan wine production line, wine warehouses, mixing workshops, Jingzhi Distillery water tower; wine making equipment; archives, Jingzhi Traditional wine brewing techniques	Yipin Jingzhi, the representative product of the company and the best-known Chinese sesame-flavored liquor, was made after half a century of independent innovation.
37	Dezhou Machin e Tool Plant	Canal of Dezhou City, Shandong Economic Developme nt Zone	The former Dezhou machine tool plant sixth workshop, heat treatment workshop, boiler room, office building; former Dezhou iron factory staff hall, staff canteen; air-raid shelter dug by factory workers in the 1960s, memorial statue of Chairman Mao; set of 20th century machine tools.	It not only has the typical cultural characteristics of Soviet architecture, but it also incorporates the unique elements and symbols of Chinese architecture. It is \an indelible memory of the development of Chinese engineering and technological power.
38	Luoyan g Refract ory Material Factory	Jianxi District, Luoyang City, Henan Province	Soviet style site of high-aluminum workshop, silicon workshop site, mechanized raw material warehouse.	It represents one of the 156 key national project of the "First Five-Years plan". During the "Sixth Five-Year Plan" period, the plant was awarded the honorable titles of National Advanced Unit for Enterprise Reorganization, National Excellent Enterprise Management Unit, Henan Excellent Enterprise Management Unit, and the Clean Factory named by the Ministry of Metallurgy.
39	Luoyan g Copper	Jianxi District, Luoyang	Soviet style office building, testing center office building, technical center office building.	It represents one of the 156 key national projects of the "First Five-Years plan".

	Processi ng Plant	City, Henan Province		
40	Gezhou ba Water Conserv ancy Project	Xiling District, Yichang City, Hubei Province	Earth-rock dam on the left bank, Sanjiang non-overflow dam, Huangcaoba concrete dam, concrete gravity dam on the right bank, Erjiang sluice gate, Sanjiang sluice gate, Dajiang flood sluice gate, No. 1 ship lock, No. 2 ship lock, No. 3 ship lock, 2 Yangtze River Power Station, Dajiang Power Station, Three Rivers Silt Dike, Dajiang River Silt Dike.	Known as "the first Yangtze River dam, it was the largest hydropower project in China before the completion of the Three Gorges Project.
41	2348 Pu Textile Factory	Chibi and Xianning City, Hubei Province	Textile factory building, knitting factory club, air-conditioning cooling water tower ruins, thermal power plant ruins, special railway line ruins.	
42	Zhaoliqi ao Tea Factory	Chibi and Xianning City, Hubei Province	Blue brick production line workshop, bucket pusher, bolt remover, cap removing machine, pre-pressing machine, main press, brick discharging machine and bucket mold circulation line, replication workshop, old replication main material production line, baking workshop, raw material section Warehouse No. 2, Raw Material Warehouse No. 3;	The very beginning of the enterprise can be traced back to the 1860. In 1954, invented the method of pressing cold-packed bucket molds, and implemented mechanization of the copying process. The frontier tea implements mandatory plan management. The site has high cultural and technological value in the field of national tea production development.
43	Zhuzho u Main Engine Factory of Guangd ong- Han Railway	Shifeng District, Zhuzhou City, Hunan Province	Preparatory office, joint factory building, reconstruction of the office building, bullhead planer (purchased in 1935), plant, locomotive, track projects and other historical materials.	As the first large-scale locomotive repair shop after the completion of the Yuehan Railway, it has been the cradle of electric locomotives of modern China. Many "firsts" have been developed here.
44	Xinhua ng Mercur y Mine	Huaihua City, Hunan Province,Xi nhuang, Tung (ethnic group) Autonomou	Fire mining relics, supply and transportation department, oil deposit site, power plant, staff housing; mercury mining company branch site, auditorium, guest house, mining department staff dormitory area; Guren mine, modern mine, mechanical and electrical	With centuries of activities, the site represents an epitome of the history of China's mercury mining and it is a precious remain for studying the history of my country's mercury mining.

Tin and Antimo ny mines	Lengshuijia ng City, Loudi City,	maintenance department, children's primary school, kindergarten, staff bathhouse, hotel, wharf; Sifangding modern mine site, explosive depot, mercury mine staff club, Laohuao staff dormitory area. The site of the century-old mine, shaft of the South Mine, shaft of the South	It was mined at the end of
Antimo ny	ng City, Loudi City,	· · · · · · · · · · · · · · · · · · ·	It was mined at the end of
	Hunan Province	Mine, the South Mine pressure fan room, the second vertical shaft of the mining and dressing plant, office building, the Xikuangshan exhibition hall, the workers' cultural palace, Yangguling Bunker, South District 345 Air Defense Project; the city currency issued under the name of the tin mine (1911) and other archive materials.	the Ming Dynasty and the beginning of the Qing Dynasty. It was named "Tin Mine" because it mistaken antimony for tin. The reserves and production of antimony rank first in the world.
Old Site of the First Factory of the Ordnan ce Depart ment	Jiulongpo District, Chongqing City	Production holes; 10 sets of lathes such as planers, drilling machines, and milling machines; more than 50 sets of tools such as wrenches and shovel; the official rifle Czech type light machine guns, grenadiers, mortars and other products; "Factory Staff Address Book" and other archive materials	It was listed in the seventh batch of national key cultural relics protection units on March 5, 2013 It was an important Anti-Japanese war arsenal built underground.
47 Shizitan Hydrop ower Station	Changshou District, Chongqing	Shizitan reservoir dam, hexagonal pavilion, octagonal pavilion, Shizitan hydropower plant and office building, surge tank and power generation equipment; Shangtong hydropower station dam, surge tank, powerhouse and power generation equipment; Huilongzhai hydropower station dam, powerhouse and Power generation equipment; dam, powerhouse and power generation equipment of Xiadong Hydropower Station	It is one of the 156 key national projects of the First "Five Years-plan".
48 Soy Sauce Brewin g Worksh op	Hejiang County, Luzhou City, Sichuan Province	Jianghan yuan workshop, natural exposure field, Office Area, Temple.	In 2019, it was included in the eighth batch of national key cultural relics protection units.
49 China Gas Turbine	Jiangyou City, Mianyang	3 sites: Aircraft engine; High altitude simulation test; Site of the inspection base.	China Gas Turbine Research Institute (also known as China Aviation

	Researc h Institute	City, Sichuan Province	High-altitude simulation test bench, air supply system, cooling water system, supporting plant and other equipment plant, Baiguo Temple, office building, Qian Dalai dormitory, Dong Shaoyong's former residence.	Institute 624) is an advanced aviation research institute focused on aerospace propulsion technology, product research, development and qualification of tests base which belongs to China Aero Engine Corporation.
50	Site of Yonglic huan Factory	Wutongqiao District, Leshan City, Sichuan Province	The former site of Yonglichuan Factory mainly includes: "Xintanggu" stone inscription handwritten by Mr. Fan Xudong. Stone workshops (power plants, soda ash plants); Refining chambers and large-scale storage tanks for water "softening" treatment; the first mechanical workshop in Asia at that time; large-scale corridor-style architectural offices and laboratories; the mansion building where Fan Xudong and Hou Debang work and live; an underground tunnel; cave workshop; staff residence, a cross building and a first-floor building.	In 1918, China's famous industrialist, the father of the Chinese national chemical industry Fan Xudong, founded the Yongli Soda Plant in Tianjin to produce soda ash, which was the first soda production in the history of my country's national chemical industry. In 1937 he moved the production in Sichuan province.
51	Sichuan Internati onal Radio Site	Dongpo District, Meishan City, Sichuan Province	Receiving station part: above ground and underground oil machine rooms, central control room, telex room, carrier room, office building, troop barracks; monitoring station, Marconi receiver, Marco Telegraph Error Correction Machine, Berne Telegraph Error Correction Machine, ZB320 Telegraph, ZB319 Telegraph, Single Sideband Wireless Telephone Terminal, Electric Key Telegraph Trainer 75KW Diesel Generator, Domestic Receiver, Antenna Sharing Device; Signal station part: feeder impedance conversion room, antenna east-west exchange room, sending station water tower, generator cooling water pump room, cooling pool, army barracks, army representative room, guard unit bunker, work area entrance bunker; antenna exchange switch drum, computer room Power distribution cabinet, underground oil engine room 200KW diesel generator	The former site of Sichuan International Radio Station was built during the "Three Lines" period (1965) and was affiliated to the Ministry of Posts and Telecommunications; the construction of this project had a great strategic significance and a high technological, social and historical value.

			set, 35KW single sideband transmitter exciter, 7KW transmitter exciter, 6-8KW single sideband transmitter exciter, exciter exchange cabinet, carrier, Control clock, line amplifier frequency synthesizer; Underground engine room: underground oil engine room, oil engine room power distribution room, underground fan room, engine room maintenance room	
52	Changz heng Electric No. 12 Factory	Huichuan District, Zunyi City, Guizhou Province	Assembly workshop, cold work workshop, blanking workshop, paint workshop, supply warehouse, finished product warehouse, factory gate; 35 tons open double-column tilting press, CW6140A ordinary lathe, J23-100 open tilting press, M-8950B Forming Grinding Machine Z3040 Radial Drilling Machine, Vertical Lifting Milling Machine, Relays, Transformers, etc. 17 pieces; Congratulations from the Central Military Commission of the State Council of the Communist Party of China, Letters of Appreciation from the Commission of Science, Technology and Industry for National Defense and other archive materials.	The factory is not familiar to many young people in Zunyi. However, during the third-line construction period of the last century, it was famous for being a key backbone enterprise in the national electric appliance industry which made great contributions to the development of machinery, metallurgy, military industry and other national industries.
53	Guifei Strength test center for aviation	Zhenning County, Anshun City, Guizhou Province	Aircraft strength test plant, strength test center, main plant; manual loading console, oil filling cart, chain hoist, actuator, mechanical vibration table, electric double beam crane.	It was constructed in the 1960s to conduct tests for the development and mass production of fighter aircraft. The site had very important meaning for the development of the national aviation industry offering a scientific basis for quality test and providing a technological improvement of the aviation industry.
54	State- owned 298 Factory	Xishan District, Kunming City, Yunnan	13 caves, German-made thread lathe, German-made metal cutting machine, glass round scale machine, six-axis polishing machine, factory-made equipment crane, universal tool microscope, Archimedes spiral scoring machine, Switzerland Glass forming machine for vacuum coating machine	It is China's first optical instrument factory and the cradle of China's optical industry. Factory 298 created China's first military telescope, the first air-to-air rangefinder, and the first set of missile ground sighting equipment.

				Development has promoted the modernization of national defense and had a profound impact on the development of China's optical industry.
55	Yimen Copper Mine	Chengguan District, Lhasa City, Tibet Autonomou s Region	Muben concentrator, Yimen mining bureau machinery repair plant, Muben substation, mining bureau passenger depot, Muben bridge, 2 suspension bridges, 3 soviet expert buildings, green juice cinema; heavy iron plate feeder, rotary crusher 19 sets of machinery and other equipment, a batch of casting wooden molds	It has made great contributions to the economic development of Tibet and is known as the "Night Pearl on the Lhasa River".
56	Nagin power plant	Chengguan District, Lhasa City, Tibet Autonomou s Region	Shunhe earth-rock mixed dam, overflow dam, barrage, water inlet, powerhouse, tailrace	The main hydroelectric power plant in Lhasa which basically solved the electricity consumption for industry, agriculture and daily living in Lhasa at that time.
57	Duodi Hydrop ower Station	Chengguan District, Lhasa City, Tibet Autonomou s Region	Barricades, diversion channels, powerhouses; 3 generator sets with a single unit capacity of 220KW, valves and control systems, governor excitation systems, protection devices, DC power supplies, power transmission systems, water supply and drainage systems and other auxiliary equipment	In Duodigou, the northern suburbs of Lhasa, China's second hydropower station and Tibet's first hydropower station have been built
58	Yaozho u Ceramic Industry Heritag e Group	Wang Yi and Yintai district, Tongchuan City, Shaanxi Province	Yaozhou Kiln Site Huangbao Reserve: 7 Sancai workshops, 2 Sancai kilns, 2 Tang Dynasty kilns, 3 Song Dynasty kilns, Tongchuan Electric Porcelain Factory: East Dafang, West Dafang, firing kilns, Office building, front building, middle building Tongchuan Building Ceramic Factory: wall and floor tile workshop, Huangbao Cinema Chenlu Ceramic Factory: seven-sided kiln, several hole brick kiln and other ceramic workshops, sagger production workshop, glaze workshop, original Chen 13 kilns, round kiln, mud yard, office building of the main factory, staff hall, and 8	Yaozhou Porcelain, is a product of China's National Geographical Indications. Representative of porcelain typology called celadon, Yaozhou porcelain is a thin and firm porcelain characterized by a glazed and translucent surface and blue color. Yaozhou Ceramics Industrial Heritage Group includes Tongchuan Electric Porcelain Factory, Tongchuan Building Ceramic Factory, and China Yaozhou Kiln Furnace

			sets of 2T ball mills in the primary school of Chenlu Ceramics Factory	Ceramic Factory in Tongchuan, Shaanxi, with the central area of Huangpu Town, Tongchuan City and the location of Chenlu Ceramic Factory as the axis. Covering the Yaozhou Kiln site and the protection zone of Chenlu Town, the total area is about 260 hectares. On May 20, 2006, Yaozhou kiln ceramic making skills were approved by the State Council to be included in the first batch of national intangible cultural heritage lists.
59	Yumen Oil Field	Yumen Old City, Jiuquan City, Gansu Province	Well No. 1, Well No. 4, Yumen oil refinery site, Xiheba cave dwelling, Laojunmiao oilfield exhibition room	Yumen Oil Mine is considered the "cradle" of China's petroleum industry.
60	Qinghai Mangya Asbesto s Mine	Mangya City, Haixi Mongolian and Tibetan Autonomou s Prefecture in Qinghai Province	Mining plant coarse and medium crushing workshop, selection workshop, inspection room, machine repair plant, storage, cargo shed, factory road, workers' cultural hall, mining area staff dormitory, mining area staff bath, mining area comprehensive office building, mining area post and telecommunications bureau, mining area water pump room, mining area employees Children's Primary School, Armed Forces Department, Materials Department, Public Security Department Complex, Transportation Department, Staff Canteen, Staff Hospital, Staff Hospital Outpatient Department.	It was founded in the 1950s and is the largest chrysotile asbestos mining and beneficiation joint enterprise in China. In July 2020, the heritage project was included in the "Red Education Base of Haixi Prefecture, Qinghai Province"
61	Dushan zi Oil Refiner y	Karama, Xinjiang Autonomou s Region Dushanzi District, Yishi	Dushanzi Oilfield Site, Xinjiang's First Oil Well, Petroleum Workers Club; Distillation Kettle and Supporting Facilities; Archives	The largest domestic refining and chemical integration project

Beijing satellite manufa cturing plant	Haiding district, Beijing	Plant No. 3 (adding core items to the second batch of national industrial heritage projects).	1 0

CHAPTER 4 INDUSTRIAL HERITAGE IN CHINA

The last part of the study is dedicated to wrap up all the issues questioned and analyzed by previous chapters, contextualizing them on the real national practice, to the extent to read them through a comprehensive national lens. The aim would be to use all the theoretical framework built up by the previous chapters to analyze the data collected by the census and the database in order to make them speak clearly about the nowadays heritagization process of industrial remains. The first part of the chapter would question the data collected in Chapter 3, translating the quantitative research data into a narrative description. The analysis of the data collected in the third chapter, read through the lens of the administrative, juridical and ideological regimes studied in previous chapters, will try to demonstrate identity, functions and goals of what it can be defined as a specific Chinese heritagization process in protecting and managing industrial heritage. This last part of the study will try to translate quantitative data of the census into a comprehensive understanding of China's industrial heritagization system. The model would like to demonstrate the relations between the development of policies in response to social and urban needs, within a precise ideological framework (Made in China 2025 and the latest document Implementation plan for promoting the development of industrial culture (2021-2025). This ideological framework acted, through the years, as a big theoretical box where to contextualize and give meaning to the promotion and the enhancement of the Chinese industrial culture and industrial spirit in order to obtain bilateral effectiveness in: 1. developing creative industries (to support the transformation of industrial sites); 2. sustaining urban regeneration (increasing the land use and the value of the land in central urban areas); 3. developing the industrial tourism in order to economically sustain the entire process and model.

4.1 Mapping China's national industrial heritage (2017-2020)

As stated by Ai Zhike (2019) the "protection of industrial heritage is a reunderstanding of the history of human industrial technology and civilization and is an important part of the protection of cultural heritage". The understanding of the national industrial legacy, of its's composition, it's geographical distribution, it's qualitative and quantitative nature, represents a relevant basis to the improvement of social awareness, academic research, political debate and legislative action enlargements to the extent of enhance the industrial heritage protection and management system. This study gave an overview on the evolution of the industrial heritage discourse in China from the point of view of the policies adopted by the country to deal with its own legacy. The policies and the regulations issued by the central government have been presented within the academic debate and the ideological and political framework, offering a solid background where to contextualize the status quo of the industrial heritage in China after the entering in vigor of those previously mentioned regulations. This part of the study is dedicated to the quantitative analysis of the Chinese heritage phenomenon, to test and to demonstrate the adaptation, to the reality of the facts, of the theoretical, ideological and legislative framework developed by the country over the years.

The first evidence is that the total number of the industrial heritage sites selected at national level is 164. To this number, we should add other 30 sites which have just been selected in 2021 and published on the *Fifth Batch of National Industrial Heritage Recognition and Application Work*, released on December 15th 2021. Despite the fact that, due to time limit reasons, this fifth list is not part of this study and census, it is worthy to mention that the updated number of industrial sites protected at national level is 194 according to the lists issued from 2017 to 2021 (MIIT, 2021).

Considering the time limit of this study, 2017-2020, the elaboration of the data collected by the census and by the database [Appendix V], all the 164 listed industrial heritage sites are geographically distributed as follow: Beijing 8 sites; Tianjin 3 sites; Hebei 9 sites; Shanxi 7 sites; Liaoning 11 sites; Jilin 2 sites; Heilongjiang 8 sites; Shanghai 3 sites; Jiangsu 9 sites; Zhejiang 4 sites; Anhui 9 sites; Fujian 4 sites; Jiangxi 11 sites; Shandong 10 sites; Henan 4 sites; Hubei 7 sites; Hunan 5 sites; Chongqing 5 sites; Sichuan 15 sites; Guizhou 6 sites; Yunnan 4 sites; Tibet 4 sites; Shaanxi 6 sites;

Gansu 4 sites; Qinghai 1 site; Xinjiang 2 sites; Qingdao 2 sites; Guangdong 1 site.

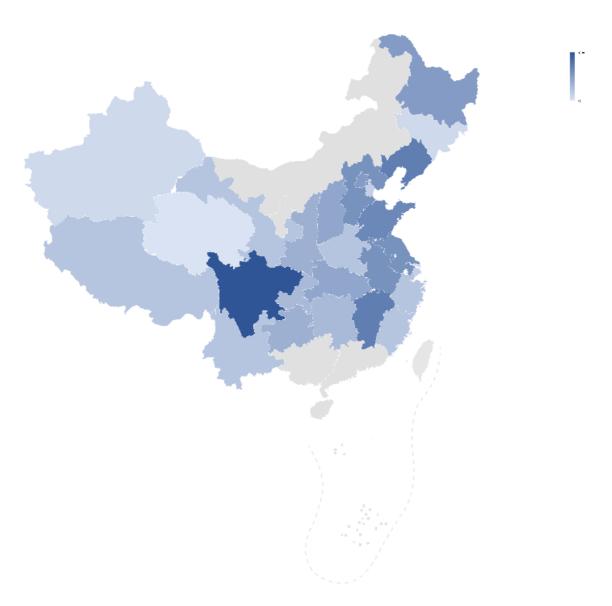


Figure 4.1 The map shows the geographical distribution of the industrial national heritage sites as listed by the four batches of national lists (2017-2020) issued by the Ministry of Industry and Information Technology. (Source by the author)

The map [Figure 4.1] represents the geographical distribution of national industrial heritage sites according to the data of the census. The north-eastern regions of China are, once again, confirming their strategical relevance in representing the driving force of the national industrialization progress, as confirmed by historical and economical records.

Surprisingly, Sichuan¹ resulted the region with the highest concentration of industrial heritage sites. Chinese territory seems to be well represented by the census. Almost all the regions are represented by the national lists, except for Inner Mongolia, Ningxia and Guangxi regions and the island of Hainan.

As enlightened in chapter 3, paragraph 3.1.1. "Industrial Heritage: values and historical categories", from the point of view of the historical periodization, the history of China's industrial development is commonly² divided into four main periods. As previously discussed by this study³, the official documents issued by the central government agencies and the majority of scholars recognize these periods to divide the industrial development China: the first period refers to the establishment of the traditional Chinese handicrafts during the ancient times which preceded the development of the modern national industry. The beginning of the Opium War (1840) has been chosen as the historical moment which brought China to the next stage of its industrial development: starting from that date, through the all Sixties of the Nineteenth century Qing government has led the way to the "Westernization Movement" with military technology's update as main objective; this period can be regarded as the start of China's industrial civilization. The third historical and technological phase of the national industrial development started with the end of Qing Dynasty (1911) and lasts until the foundation of the People's Republic of China (1949). The fourth, and last phase of China's industrial development starts with the foundation of the modern country (1949) and lasts until the early Eighties with the beginning of the economic reforms (1982).

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¹ It has to be specified that a large part of Sichuan's industrial sites selected by the lists are belonging to the so called "Third Front Movement" which represented a huge industrial development plan launched by China in 1964 with the aim to empower underdeveloped economies of the country. Southwest China (including nowadays Sichuan, Chongqing, Yunnan, and Guizhou was one of the geographical cores of the plan. The plan industrialized part of China's most interior and agricultural region stimulating previously poor and agricultural economies in China's southwest and northwest. See Chapter 3, note n. 11 of this study.

² According to official documents such as Guiding Opinions, Interim Measures and Interpretation of Interim Measures, (Bureau of Industry and Information Technology, 2018) and to scholar's researches (Que 2008; Ai, 2019; Liu 2020).

³ See paragraph chapter 3, paragraph 3.1.1. "Industrial Heritage: values and historical categories" of this study.

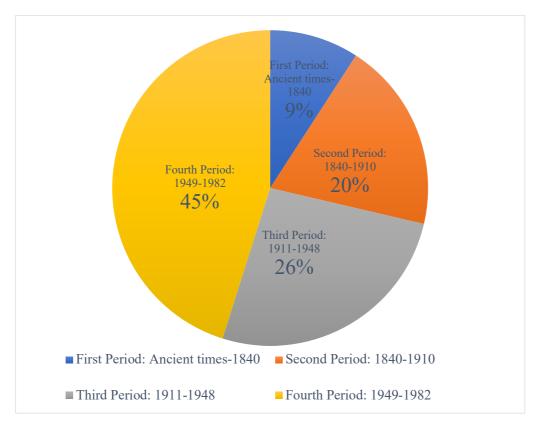


Figure 4.2 Historical classification of China's Industrial heritage site. The graphic show the percentages of the national heritage lists representing the four historical periods of the industrial development of the country according to the periodization discussed in chapter 3 paragraph 3.1.1 "Industrial Heritage: values and historical categories". (Source by the author)

Considering the date of foundation of every industrial site, the information collected by the census and elaborated through the database allowed to understand the composition of the industrial heritage referring to the four historical categories. As shown by the graphic [Figure 4.2], almost half of the national industrial heritage is represented by complexes belonging to the fourth phase of Chinese industrial development. The 45% of the total listed industrial heritage (74 sites in total), is referring to industrial complexes founded between the foundation of New China (1949) and its economic reforms and opening up period (1982). As demonstrated by the census and the database, the majority of the sites belonging to the Fourth Period (1949-1982) of national industrialization process, are referring to the "First Five-Year Plan" (1953-1957), so that, a great part of that sites which have been established between 1953 and 1960, represent some of the 694 key large and medium-sized industrial projects planned by China or embody some

examples of the 156 Key national projects developed with direct aids of the Soviet Union⁴.

Of the 74 sites belonging to the Fourth Period of the Chinese industrialization, 39 sites have been founded between the 1953 and the 1960 as direct consequences of the First Five-Year Plan. These 39 sites are largely represented by heavy industries, raw material enterprises and power plants, confirming that this was the primary direction of the New China's industrialization process. Among these 39 sites, 12⁵ sites are part of the 156 Key national projects developed during the "First Five-Year Plan". As reported by He and Zhou (2015), the new country needed to found a new economy driven by the socialist Soviet model and to do that China needed to establish and enhance "the electricity industry, the coal industry, and the petroleum industry, to establish and expand the modernized steel industry, non-ferrous metals industry, and basic chemicals industry; establishing machinery manufacturing industries that manufacture large metal cutting machines, power generation equipment, metallurgy equipment, mining equipment, automobiles, tractors and airplanes". Of the 156 projects established under the guidance of the Soviet Union during the "First Five-years Plan", 44 of them were military industry enterprises, 20 dedicated to the development metallurgy field, 24 dedicated to the machinery processing and 52 were energy plants (He and Zhou, 2015). If we look at database, the typologies of enterprises mentioned by He and Zhou (2015) are matching with the listed industrial typologies belonging to the Fourth Period. As shown by the graphic [Figure 4.3], out of the 74 listed sites embodying the fourth industrial period, the 14% are sites dedicated to the development of aerospace engineering; another 14% is represented by mines, the 18% is represented by power plants and the 7% are heavy industry enterprises (machinery manufacturing and metallurgy industries). According to

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⁴ The "First Five-Year Plan" (1953-1957) was issued by the direction of the Central Committee of the Communist Party of China (CPC) presided by the Premier Zhou Enlai and Chen Yun. Adopting the soviet economic model, China planned to build 694 large and medium-sized industrial projects as pillars of the new socialist industrialization (He; Zhou, 2015)

⁵ According to census (Appendix IV):

Second List: site n. 2 State-owned 751 Factory in Beijing; site n. 26 First tractor manufactory in Luoyang City, Henan Province; site n. 27 Luoyang Mining Machinery Factory in Luoyang City, Henan Province; site n. 38 Wangshiwa Coal Mine in Tongchuan City, Shaanxi Province.

⁻ Third List: site n. 31 China Nuclear Power Plant 272 in Hengyang City, Hunan Province.

⁻ Fourth list: site n. 9 Fuxin coal industrial heritage group in Fuxin City, Liaoning Province; site n. 16, Beiman Special Steel company in Qiqihar city, Heilongjiang Province; site n. 19, Changzhou Daming Yarn Factory in Changzhou Economic Development Zone, Jiangsu Province; site n. 28 Hongdu Machinery Factory in Nanchang City, Jiangsi Province; site n. 38 Luoyang Refractory Material Factory in Luoyang City, Henan Province; Luoyang Copper Processing Plant in Luoyang City, Henan Province; n. 47 Shizitan Hydropower Station in Chongqing.

the data collected, there are other two important industrial typologies which are representing the New China's economy: 9 sites (12%) are dedicated to the production of traditional Chinese cultural goods and other 9 companies are related to the production of consumer goods. This can be explained by the shift done at the beginning of the Fifties to a planned economy, so that, most of the famous companies producing outstanding Chinese traditional products, such as paper, ink, Chinese brushes, porcelain and so on, despite their centennial history, they have been re-founded as new state- owned enterprises.

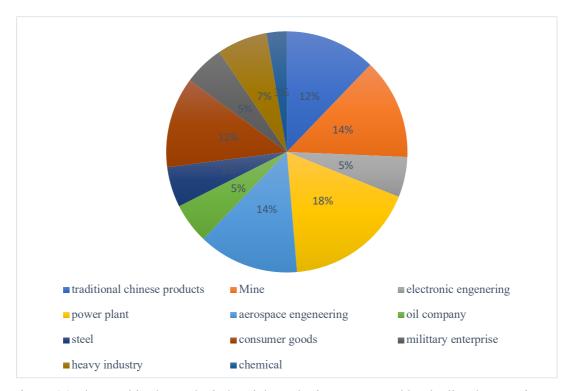


Figure 4.3 The graphic shows the industrial typologies represented by the listed enterprises belongings to the Fourth industrial period (1949-1982) and their percentages according to the database (Appendix V). (Source by author)

CHAPTER 4 INDUSTRIAL HERITAGE IN CHINA

If we consider the geographical distribution⁶ of these 74 sites representing the industrial heritage of the New China, the data collected confirms the historiography on Chinese industrialization process.

A large part of the listed industrial enterprises is located in the north east regions with Heilongjiang and Beijing which detain the majority of them. Even if, as shown by the map [Fig 4.4], the Fourth Period (1949-1982) of the Chinese industrial development is well represented among all over the country, another trend on the geographical distribution which can be traced is the concentration of the listed enterprises on the east regions with respect to the rest of the Chinese territories (except for Sichuan region which counts 7 sites, but again this can be explained by the "Third Front Movement").

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⁶ The 74 listed sites belonging to the Fourth historical period (1949-1982) of the Chinese Industrial development are geographically distributed as follow among the Chinese territories: Beijing 6 sites; Heilongjiang 7 sites; Anhui 7 sites; Zhejiang 2 sites; Henan 4 sites; Sichuan 7 sites; Guizhou 4 sites; Shaanxi 4 sites; Gansu 3 sites; Tianjin 2 sites; Xinjiang 1 site; Shanxi 1 site; Fujian 2 sites; Jiangxi 4 sites; Shandong 3 sites; Hubei 4 sites; Hunan 1 site; Chongqing 3 sites; Tibet 4 sites; Hebei 1 site; Liaoning 1 site; Shanghai 1 site; Jiangsu 1 site; Qinghai 1 site.

⁷ See Chapter 4, note n. 1 and Chapter 3, note n. 11 of this study.

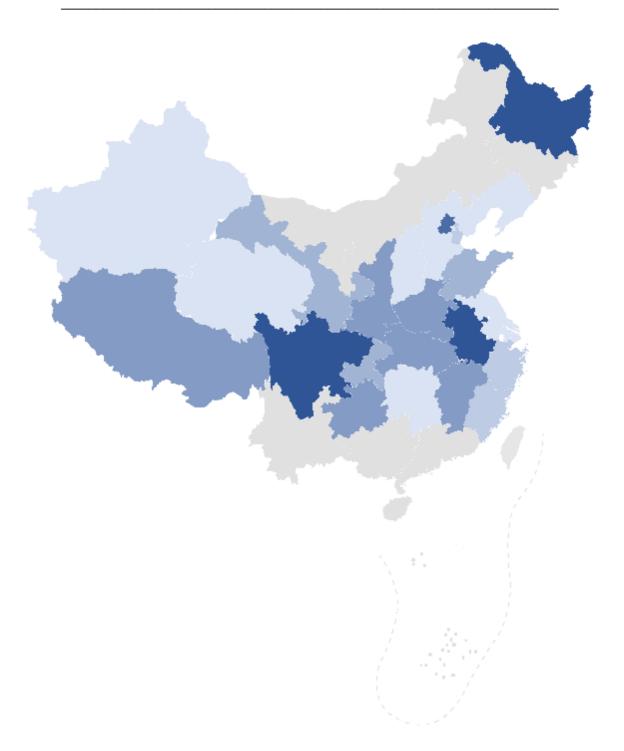


Figure 4.4 The map shows the geographical distribution of the 74 industrial heritage sites belonging to the Fourth Industrial period (1949-1982). (Source by the author)

These data are in line with what stated by other studies⁸ on the industrialization process of the New China, in particular with the distribution of the of the 156 Key national projects and the additional 694 key large and medium-sized industrial enterprises developed during the "First Five-Year Plan". As reported by the detailed study of He and Zhou (2015) "in the distribution of the 156 projects, the central government—on the basis of such construction principles as regional balanced development, resource allocations, focused development on inland industry, abundant consideration of defense and national security, etc.—established a regional location plan: on the one hand allowing the Northeast, Shanghai, and other existing industrial bases to play an ample role, and on the other implementing focus construction in the region north of the Yangtze River and east of Baotou and Lanzhou, making it into a new industrial base [...] Out of the 106 civil industrial, 50 were deployed in the northeastern region and 32 in the central region. Of the 44 national defense enterprises, 35 were deployed in the central and western regions, of which 21 were located in the two provinces of Sichuan and Shaanxi." Again, comparing the data collected by the industrial heritage census and the mentioned study it is possible to match some trends on the listed enterprises distribution on Chinese territory. During the "First Five-Year Plan" (1953-1957) 694 additional projects were developed by the Chinese government as industrial pillars of the newly founded state. As reported by He and Zhou (2015), in 1954 the State Planning Commission confirmed the selection of the location where the 694 should have been established: the 65% of these projects were distributed in 45 cities and 61 workers towns West of Beijing-Guangzhou railway, while the 35% were allocated in 46 cities and 55 workers town east of this axes. This geographical distribution of the First Five-Year Plan's industrial enterprises- which would have led the Chinese industrialization process- is still readable in the census and maps elaborated by this study. The central government plan allowed the industrial development of the country in a much more homogeneous way with respect to the historically preferred north-east axe which, in the Old China, detained the 70% of the national enterprises.

As stated by Ai (2019) the fact that there are more modern industrial heritages in the

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⁸ Among the others, Ai Zeike (2019) reported that in 2013, 58 modern industrial heritage sites where listed among the Seventh National Key Cultural Relics list announced by the State Administration of Cultural Heritage. Among these modern industrial heritages, 53 are located in the coastal cities along the central and eastern coasts, accounting for 76.8% of the total; 16 are located in the western cities, accounting for 23.2% of the total.

central and eastern regions is roughly in line with the industrial development geographies

show by China in its modern times, but it is obviously not enough to explain the

development of industries established in previous times.

In order to better understand the composition of the national industrial heritage, its geographical distribution and its typology, it is worthy to have a look to the data related to the first three periods of the Chinese industrial development process. Given that the majority of the listed industrial heritage sites (the 45% of the total) are enterprises established after the foundation of the New China (1949), the database (Appendix V) and to the map [Figure 4.3] show that the other three periods of Chinese industrial development are represented as followed: the sites belonging to the First Period (ancient times- 1939) of the national industrial history are representing just the 9% of the total; the Second industrial Period (1940-1910) is exemplified by the 20% of the listed sites; the Third Period (1911-1948) is embodying the 26 % of the total.

The industrial remains representatives of the First Period have been founded during the ancient times, having as temporal limit the beginning of the Opium War (1840). The large part of these 15 sites, reflects the achievements of smelting, casting, salt making, and distillation process in the history of Chinese civilization. In detail, the majority of the sites belonging to the first stage of Industrial process, are archeological site dates back to the Shang (c. 1600-1050 BC), Tang (618-906), Yuan (1279-1368) and Ming (1368-1644) dynasties, and are sites dedicated to the craftsmanship of the most important products of Chinese cultural tradition such as distillery of local rise or sorghum-based wines, porcelain workshops, ink workshop or ancient mines.

The Second Period of Chinese industrial history (1840-1910)⁹ is, economically speaking, characterized by the so called "Westernization Movement" or China's "Self-Strengthening" movement. These decades are recognized as China's early industrialization attempts. The moribund Qing Dynasty were experiencing a very tough

⁹ The author is using this periodization according to the reflections debated in chapter 3, paragraph 3.1.1. "Industrial Heritage: values and historical categories" of this study. The beginning of the First Opium War (1939) is taken as crucial year to divide the pre-industrial China's economy to the first attempts promoted by the moribund Qing Dynasty to modernize the country. So that, the periodization adopted by this study recognizes the second step of China's industrial development starting with the First Opium War and the raising awareness by the Qing Dynasty on the necessity to adopt western technologies to reform the country from the point of view of the infrastructures, the use of raw resources, the development of the national industry and of the military industry. The natural limit of this second period is recognized with the end of the Qing Dynasty (1911).

moment scarfed by two Opium Wars (the first lasting from 1839 to 1842 and the second one going from the 1856 to 1860) which saw the country suffering the defeat inflicted by Great Britain's military forces. The first opium war, exposing the participation of the Chinese army and opening it to the penetration of the European army, had the double effect of upsetting the social equilibrium of China and exposing the country to the influence of western powers. Moreover, the Nanjing Treaty, which ended the war in 1842, guaranteed the British the opening of some treaty ports, including Canton and Shanghai, the free access of opium and other products in the southern provinces with low customs tariffs. In the treaty ports the British could reside and enjoy the extraterritoriality clause. This led western products, technology and knowledge to slowly enter the country. During the decade 1850-60, China found itself facing at the same time a serious internal crisis which culminated in the long and very bloody peasant rebellion known as the Taiping revolt (1951-1964) - and a new unfortunate clash with the British, assisted this time by France. The second Opium War ended up with the Treaty of Tientsin and the Treaty of Beijing which led western influence to deeply enter the Country; in fact, the two treaties constrained China to abolish the prohibitions against the opium trade, to open other ports and to grant free movement on its territory to foreign merchants. Moreover, with the Beijing Convention, Western powers obtained customs exemptions and free access for their fleets to the Chinese river network. It was also allowed to establish diplomatic legations in the capital. This historical preamble was necessary to contextualize the first establishment of modern industries in China characterized by western technologies, investment and joint ventures. According to the census and database presented by this study, the enterprises listed as national industrial heritage belonging to this period are reflecting the historical context of a moribund Qing Dynasty which is hardly trying to self-strength its economy, political power and military industry, modernizing the country through western technologies and knowledge. The listed enterprises founded between 1840 and 1911, representing this second stage of the industrial history of China are 32^{10} . They are mainly related to the awaken of the country in strengthening the use of its own natural resources (coal and gold mines, cement caves and an early oil company), in building its railway system, in building modern docks and shipyards and in establishing

¹⁰ See the census (Appendix IV) of this study.

the early basis of the national industrial system for the consumer goods and food production (textile sector; cigarettes; beer; flour mill; vinegar).

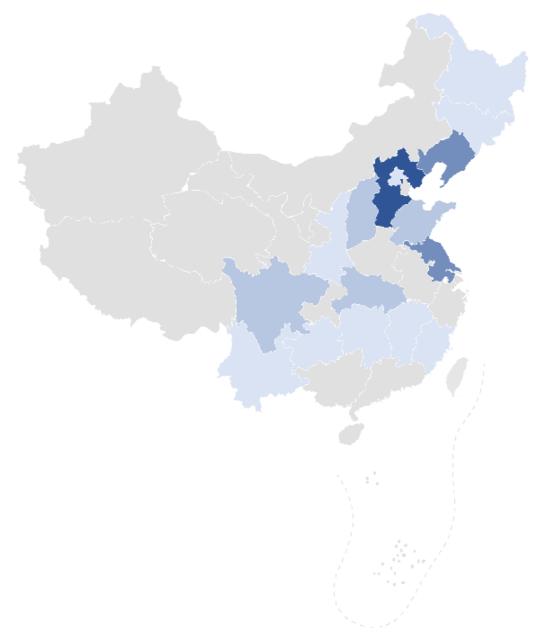


Figure 4.5 The map shows the geographical distribution of the 32 industrial heritage sites belonging to the Second Industrial period (1840-1910). (Source by the author)

As shown by the map [Figure 4.5], the geographical distribution of the enterprises listed by the Ministry of Industry and Information Technology as industrial heritage belonging to the second stage of national industrial development is mostly concentrated

in east regions with Liaoning, Hebei and Jiangsu detaining the majority of the heritage with respectively 4, 6 and 4 sites listed. The rest of listed enterprises are distributed in Shandong (2 sites), Jiangxi (1 site), Hubei (2 sites), Shanxi (2 sites), Heilongjiang (1 site), Yunnan (1 site), Shaanxi (1 site), Beijing (1 site), Tsingtao (1 site), Sichuan (2 sites), Guizhou (1 site), Jilin (1 site), Fujian (1 site), Hunan (1 site).

Among the most famous enterprises listed there are a few which are worthy to be mentioned for their typical remains, representatives of this second industrialization period. The Maoxin Flour Mill in Liangxi¹¹, Jiangsu province, for instance, still preserves the complete flour production process line: from the initial measurement and cleaning of the wheat to the second cleaning, to the grinding, sieving and grading to produce flour, up to the packaging and transportation lines. Founded in 1900 by the national industrial and commercial entrepreneurs Rong Zongjing and Rong Desheng, the plant (later rebuilt in in 1946) fully adopted advanced Western technology and equipment which, introducing advanced management concepts, allowed to transform the flour manufacturing industry from traditional processing to a modern industrial technology¹².

The Tsingtao Brewery¹³ in Qingdao is maybe the most famous example of enterprise founded in the late Qing Dynasty, during the "Westernization Movement", the first brewing factory in China built with European technology. The company was established by the Anglo-German Brewery Co. Ltd., an English-German joint stock company based in Hong Kong which owned the factory until 1916. The architectural industrial remains have been transformed into an industrial museum in 2002, turning the 1903 German redbrick office building into a visiting venue where to showcase the history of the enterprise¹⁴. It doesn't only represent one of the first example of Chinese's industrial park and museum, but it also embodies a national reference for the protection and utilization of the industrial

¹³ The Tsingtao Brewery is the site n. 35 of the database (Appendix IV) and it is corresponding to the site n. 24 of the Second Batch of Industrial Heritage list in the census.

¹¹ The Maoxin Flour Mill is the site n. 29 of the database (Appendix IV) and it is corresponding to the site n. 18 of the Second Batch of Industrial Heritage list in the census

¹² See the site n. the site n. 18 of the Second Batch of Industrial Heritage list in the census, Chapter 3.

¹⁴ See the website of Tsingtao Beer company: https://www.tsingtao.com/index.html and the website of the Tsingtao Brewery Museum: https://www.thatsqingdao.com/tsingtao-beer-museum/ and https://www.travelchinaguide.com/attraction/shandong/qingdao/beer-museum.htm

heritage.

The Dasheng Yarn Factory 15 in Nantong, Jiangsu province, represents an early modern Chinese national capital enterprise founded through the adoption of western technology. The textile company was founded by national industrial pioneer Zhang Jian who agreed with the Jiangsu Commerce Bureau to buy 20,400 British spinning machines on hold in Shanghai, quantity which accounted almost the 12% of the total spindles in the country. The industrial and architectonical heritage is well preserved and it counts workshops, warehouses, machineries and some of the original buildings built for the workers and their families, such as the primary school and the teaching building. The site is not only been listed as national industrial heritage, but it has also been labeled as Key Cultural Relic Protection Unit within the Sixth Batch of the State Administration of cultural Relic's list¹⁶.

A last sample of listed enterprises which well represents the Second Period of Chinese industrial history is the Zhaogezhuang Mine¹⁷ in Tangshan, Hebei Province. Founded in 1906, the coal mine used for the first time in Chinese history, a large-scale mechanized mining system and became well-known all over the country as the best mine in China during the late Qing Dynasty. Among the remains there is a spectacular "Foreign house" n. 10 which represents a unique architecture. Built for the British official compradors when the Qing government implemented the "Westernization Movement", the building it is still well preserved among the rest of the industrial heritage of the site. The mine is representative since was one of the mines that participated in the Kailuan strike in 1922 and it is significative for being an anti-Japanese site. Its strong technological, scientific and historical values allowed the site to be elected among the national heritage¹⁸.

The Third Period of the Chinese industrial history is represented by a very short fragment of time which goes from the end of the imperial China (1911) to the foundation

¹⁵ The Dasheng Yarn Factory is the site. N. 30 of the database (Appendix IV) and it is corresponding to the site n. 19 of the Second Batch of Industrial Heritage list in the census.

¹⁶ See the site n. the site n. 19 of the Second Batch of Industrial Heritage list in the census, Chapter 3; moreover see the website on the factory's historical archive: https://www.archives.sh.cn/dalt/dary/201203/t20120313 9616.html

¹⁷ See the site n. 4 of the Third Batch of Industrial Heritage list in the census, Chapter 3.

¹⁸ See the Industrial Net website: http://www.dayexue.com/Article/dfwh/202004/1215.html

CHAPTER 4 INDUSTRIAL HERITAGE IN CHINA

of the New China (1949). Although this stage of Chinese history is lasting just few decades, it represents a crucial turning point which, from the industrial history point of view, it is characterized by specific features. This is the time when the very basis of the new country and it identity have been set. If we let the data speak, the majority of the industrial enterprises founded at this stage of Chinese industrial development, entered the industrial heritage lists for their strong historical and social value, having played a key role within the Sino-Japanese conflicts and were determinant in the foundation process of the People's Republic of China.

According to the data collected by the author and, as shown by the map [Figure 4.6], the sites belonging to the Third Industrial period represent the 26% of the Chinese national industrial heritage and are distributed as follow: Liaoning 5 sites; Shanxi 4 sites; Zhejiang 2 sites; Chongqing 2 sites; Hebei 2 sites; Jiangsu 4 sites; Shandong 5 sites; Tsingtao 1 site; Hunan 3 sites; Yunnan 3 sites; Shanghai 2 sites; Fujian 1 site; Jiangxi 1 site; Sichuan 3 sites; Shaanxi 1 site; Jilin 1 site; Gansu 1 site; Xinjiang 1 site; Beijing 1 site.

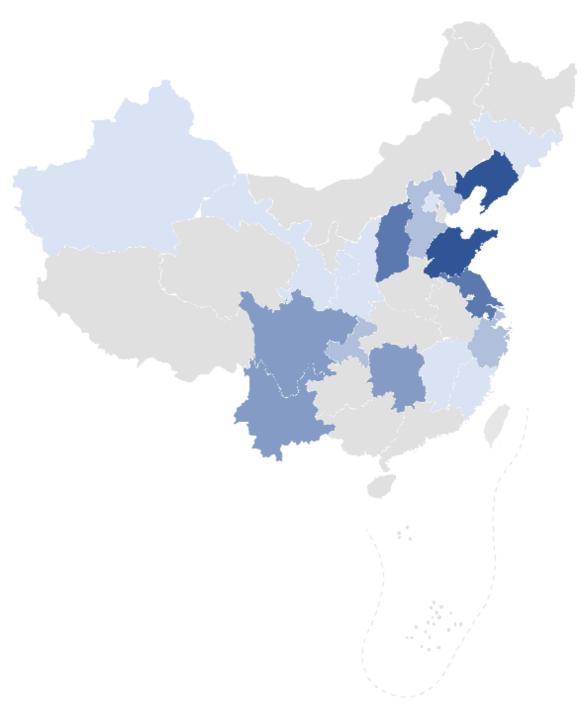


Figure 4.6 The map shows the geographical distribution of the 43 industrial heritage sites belonging to the Third Industrial period (1911-1948). (Source by the author)

A large part of the enterprises founded between the end of the Qing Dynasty (1911) and the foundation of New China (1949), are related to the heavy industry sector, to the power production, to the military industry and to the consumer goods sector; these sites are largely represented by companies which gave a crucial support to the Anti-Japanese

Resistance War (1937-1945) and a great contribution to the development of the military industry. For instance, the Yarn Factory in Baoji, Shaanxi Province¹⁹, represents the most complete industrial plant of the Anti-Japanese War in China. It once supported the supply of cotton yarn of the Northwest area troops embodying a modern industry of the region.

Due to its high historical, social and artistic values it was included in the Eighth Batch of National Key Cultural Relics Protection Units.

Another site which is worthy to mention is the Steel plant in Chongqing²⁰, a heavy industry well preserved in its architectural industrial remains, which gave an indelible contribution to the country during the Anti-Japanese Resistance War, sustaining the progress of the modern national railway system. And again, the Liu Bocheng Factory²¹ in Changzhi City, Shanxi Province, has been listed for its important historical value since it is representative of the Anti-Japanese Resistance War, as one of the most important weapon industries built by Chinese Army it symbolizes a significant heritage in the history of China's military industrialization.

Generally speaking, the data collected by the census and elaborated through the database confirmed the most evident trends of Chinese Industrialization history both from the point of view of the historical geographical development of the national enterprises along the for industrial periodization, both in terms of industrial typologies representatives of the different historical stages. Talking about industrial typologies, it would be interesting to overview and map the trends of industrial sectors represented by the four lists. To do that, the voice "industrial typology" of the database has been elaborate in two graphics [Figure 4.7 and Figure 4.8] which give us back the precise picture of the composition of Chinese industrial heritage.

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¹⁹ See the site n. 7 of the First Batch of Industrial Heritage list in the census, Chapter 3.

²⁰ See the site n. 10 of the First Batch of Industrial Heritage list in the census, Chapter 3.

²¹ See the site n. 5 of the Third Batch of Industrial Heritage list in the census, Chapter 3.

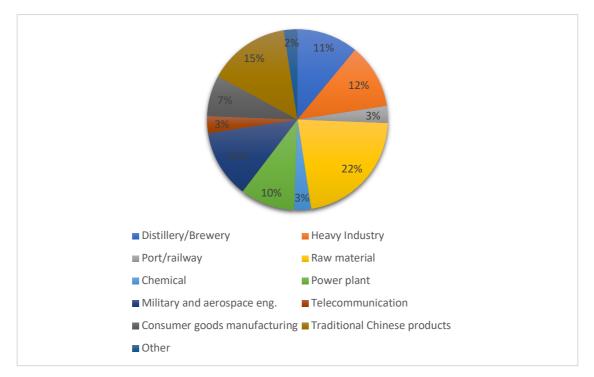


Figure 4.7 The graphic shows the categories of the industrial heritage sites selected by the four lists issues by the Ministry of Industry and Information Technology from 2017 to 2020 and their percentages according to the database (Appendix V). (Source by the author)

As shown by the graphics [Figure 4.7 and Figure 4.8], the most consistent voices of the listed industrial heritage are raw material enterprises (22%) represented by mines, oil companies, cement caves and metal alloys; another two strong assets of the national industry are represented by the heavy industry and by the military and aerospace engineering, both of them embodying the 12% on the total composition of the Chinese industrial heritage sites, followed by the 10% represented by power plants. Interesting is to notice how the traditional Chinese products symbols of the millennial cultural history of the country are sharing important percentages of the industrial heritage sites. The traditional Chinese cultural products enterprises, such as the one producing silk, porcelain, paper, ink, brushes, tea, cloisonné goods, are representing the 15% of the industrial heritage enterprises listed at national level, significantly being the second bigger category of industrial heritage after the raw material industries.

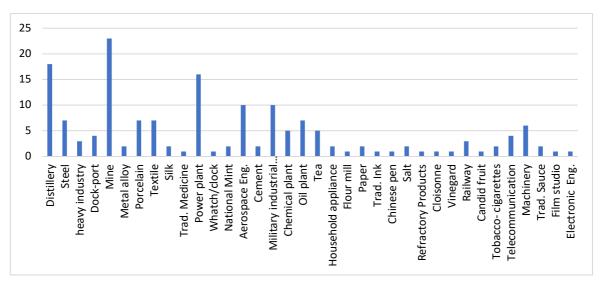


Figure 4.8 The graphic shows the typologies of all the industrial heritage sites selected by the four lists issues by the Ministry of Industry and Information Technology from 2017 to 2020 and their number according to the database (Appendix V). (Source by author)

Before to close the examination of the data collected, two voices are still important to analyze: the percentage of industrial heritage sites which have also been selected as national key cultural relic sites and the ones which have already, or are in the process to, being transformed in industrial museums or industrial parks.

According to the database (Appendix V), 24 of the listed industrial heritage sites already detained the label of key cultural relics, so the 14% of the national industrial legacy is under the jurisdiction of both the administrative system of the Ministry of Industry and Information Technology and the one of the State Administration of Cultural Relics. Although the Cultural Relics administrative system is representing a more legally structured jurisdiction, it would be interesting to develop, in future studies, a focus on some case-studies which are contemporarily detaining different heritage labels belonging to diverse ministerial jurisdictions to understand how the industrial heritage system is dialoguing with other administrative systems regarding the national cultural legacy.

The second data which is very important to consider is that, according to the availability of data while compiling the census and the database, 102 industrial heritage sites resulted to have already been turned into museums or cultural parks, or there was the evidence that they are part of a plan to be soon regenerated and reuse in that way. This means that at least the 62,2% of the listed industrial heritage at national level is part of an "heritagization" process, a very impressive percentage if considering the young age of

the industrial heritage protection and management practice of the country. This data will be useful to discuss some evidences on the last paragraph of this study.

4.2 Industrial heritage in China, to what extent?

4.2.1 Implementation plan for promoting the development of industrial culture (2021-2025)

Once the investigation on Chinese Industrial heritage has fragmented the phenomenon in policies, data and practices, a question raises naturally in order to get together the whole picture: to what extant the Chinese government has recently strengthened its engagement with the protection and the management?

To answer this crucial question is worthy to examine a last important document. In May 2021 eight governmental departments (the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Education, the Ministry of Finance, the Human Resources and Social Security, the Ministry of Culture and Tourism, the State-owned Assets Supervision and Administration Commission of the State Council, the State Administration of Cultural Heritage) have jointly issued the *Implementation Plan for Promoting the Development of Industrial Culture* (2021-2025).

The document takes origin and meaning within the map of national policies ruling the Chinese industrial heritage system. The context within which to read this document is the one showed by the map [Figure 4.9].

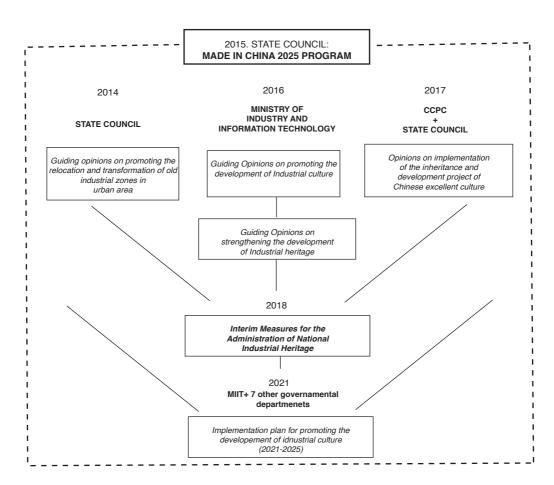


Figure 4.9 The map shows the most important documents issued from 2014 to 2021 by different central government agencies related to the development of the national Industrial Culture and to the protection and management of Industrial Heritage, mapping their relations within the big ideological, political and economic framework of *Made in China* 2025 program. (Source by the author)

As examined and discussed in chapter 2, the promulgation of the official notices, regulations and policies regarding industrial heritage have to be red within the greater ideological and political program *Made in China* 2025 ²². Starting from 2015 the government started to promote some important objectives to be fully achieved by 2025 concerning the promotion of industrial culture, the enhancement of the Chinese industrial spirit, the valorization of the national industrial tradition and history through a series of

²² Made in China 2025 is a strategic industrial and economical plan and policy promoted by the Chinese Communist Party to develop the manufacturing sector of the People's Republic of China, issued by Premier's cabinet in May 2015. The program aims to remove from the Country the label "world's factory" in order to don't be considered anymore as the country producer of cheap goods, but instead to upgrade the manufacturing capabilities of Chinese industries, growing from labor-intensive workshops into a more technology-intensive powerhouse.

different actions. Made in China 2025 acted as the bigger ideological and economic plan to strength the national soft power through Chinese industrial culture, a large framework within which many government agencies issued specific policies to achieve specific goals. Among the Made in China 2025 program industrial heritage play a crucial role in both sustaining the ideological narrative of a great Chinese industrial history and entrepreneurial tradition and both in solving the problem of huge discarded industrial plants occupying large portions of central urban land. Industrial heritage became a hot issue to deal with, which offered the possibility to nurture the ideological, political and economic goals foreseen by the Made in China 2025. Moreover, the times were mature enough to bring the long academic and scientific debate concerning the need to preserve and manage industrial heritage on the level of governmental action. So that, within the bigger frame of the Made in China 2025 program, three important documents were issued by central institutions: in 2014 the State Council promulgated the Guiding opinions on promoting the relocation and transformation of old industrial zones in urban area; in 2016 the Ministry of Industry and Information Technology issued the Guiding Opinions on promoting the development of Industrial Culture, followed the same year by the Guiding Opinions on strengthening the development of industrial heritage; in 2017 the State Council published the Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture. As seen in Chapter 2, these three documents, although having diverse purposes, acted as multidisciplinary guidelines which contributed, in different fields of the society, to prepare the ground for the industrial heritage issue, considered one of the main important goals and tool to achieve the results of Made in China 2025 program.

To the extent to better understand the theoretical ground in which all the policies showed by the map [Figure 4.9] find their origin and meaning, it is worthy to put together some extracts of these documents which help to well exemplify the general ideological framework and the objectives which link all the policies issued within *Made in China* 2025 program.

"Industry is the foundation of a strong country, and culture is the soul of a nation. Industrial culture is the sum of material culture, institutional culture, and spiritual culture formed along with the process of industrialization and permeated into industrial _____

development. It has a fundamental, long-term, and critical impact on promoting the transformation of industry from large to strong. In order to implement "Made in China 2025" and accelerate the development of industrial culture, the following opinions are hereby put forward".

[Guiding opinions on the development of industrial culture, Premise, MIIT 2016]

"At present, China has become the world's largest manufacturing country, but the problem of a large but not strong industrial system is still prominent. [...] To vigorously develop industrial culture is an important means to enhance the comprehensive competitiveness of China's industry, a strategic choice to shape a new image of China's industry and a strong support which can contribute to switch from Chinese manufacturing into a Chinese creation".

[Guiding opinions on the development of industrial culture, Art. 1, MIIT 2016]

"By 2025, the inheritance and development system of Chinese excellent traditional culture will be basically formed. Research and analysis, education, protection and management of cultural heritage, innovation and development, communication and other aspects have been coordinated to promote and achieve important results. Cultural products with Chinese characteristics and Chinese style will be considered more important. The Chinese cultural awareness and the cultural self-confidence have to be significantly enhanced as the foundation of the Country's cultural soft power has to become more solid so the international influence of Chinese culture has to increased significantly."

[Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture, Art. 4, State Council 2017]

These statements declared by different documents help to clarify, and to partially answer, to what extent in the latest years Chinese government get involved so intensively with industrial heritage issue, promoting a national standardized practice. Of course, this is a reductive perspective within which to read the phenomenon -which doesn't want to be exhaustive-, but just to track an ideological lens trough which read the relations between the development of policies in response to social and urban needs, within the

precise ideological framework Made in China 2025.

Going ahead with the reading of the national policies' map [Figure 4.9] concerning Chinese industrial culture and industrial heritage, the four mentioned documents (Guiding opinions on promoting the relocation and transformation of old industrial zones in urban area; Guiding Opinions on promoting the development of Industrial Culture; Guiding Opinions on strengthening the development of industrial heritage Opinions on the Implementation of the Inheritance and Development Project of Chinese Excellent Traditional Culture) can be considered the political and ideological premise to the Interim Measures for the administration of national industrial heritage, the very first set of rules having legal force promulgated in 2018 by the State Council with the goal to set a standardized national practice on evaluating, protecting and managing the industrial heritage.

As shown by the map [Figure 4.9] and as mentioned at the beginning of the paragraph, a latest important document has been recently released by eight governmental departments: Implementation plan for promoting the development of industrial culture (2021-2025). At a first sight, what jump to the eyes is the use of the key word "industrial culture", as seen the key concept of the entire theoretical and ideological structure, and the dates written within the brackets. Although is not mentioned at all in the document, the temptation to link it to *Made in China 2025* program is quite natural, even if, the time 2021-2025 line foreseen by the *Implementation plan* has more to be conceived as part of the *14th Five-Year Plan (2021-2025) for National Economic and Social Development*, which as the *Made in China 2025* program sees its deadline to achieve the goal in 2025.

The document id divided in four parts: 1. General requirements; 2. Key tasks; 3. Safeguard Measures; 4. Organization and implementation.

The general requirements section presents the overall ideology to guide the reading and the understanding of the policy. The industrial culture is presented as an important part of socialist culture with Chinese characteristics, so strengthening the industrial culture is seen as an important measure to implement the decisions and the arrangements of the central government and its responsibility in building a socialist cultural power. The Art. 1 of the documents says: "[..] take industrial cultural construction as an important content to promote the high-quality development of manufacturing, improve the industrial cultural development system, strengthen the protection and utilization of

industrial heritage that carries important culture, promote the Chinese industrial spirit, enrich the cultural connotation of Chinese manufacturing, cultivate new business forms and models of industrial culture and continuously enhance the soft power of national culture and the influence of Chinese culture." To achieve these goals the Art. 2 which is presented under the title of "basic principles" states: "In order to meet the needs of industrial development [...] and explore the effective path for the soft power of industrial culture to support the high quality development of the manufacturing industry [...] it is important to give full play to the role of industrial culture in empowering industrial development, improve the driving ability of cultural elements such as design innovation, quality brand, management services, etc., and promote the improvement of quality and

The premises of this *Implementation Plan* are fully aligned to what is stated and promoted in the documents previously analyzed: the content of this last policy is intertwined with and completed by what it is specified in the other documents showed by the map [Figure 4.9], so that it can be seen that it takes meaning if it is read within this context.

efficiency of enterprises, and industrial transformation and upgrading".

Given these premises and contextualized the theoretical framework, to the extent of this study, what is interesting about this document are the key tasks. The action plan issued by the eight governmental departments is tackling the following objectives, enshrined in eight articles: the art. 4 encourages to explore the value connotation of industrial culture and to promote the industrial spirit; the art. 5 supports the cultural empowerment to promote the integrated development of industrial culture and industry; the art. 6. invites to develop industrial tourism resources and expand new space for consumption; the art. 7 asks to improve the level of science and education, and to spread industrial culture; the art. 8 promotes the improvement of the protection and utilization of industrial heritage; the art. 9 supports the development of new industrial museums and the increasing of new carriers of industrial culture; the art. 10 solicits the incrementation of the communication of industrial culture related projects through multiple channels; the art. 11 demands to strength the departmental coordination and cooperation to promote new progress and achievements in the construction of industrial culture with Chinese characteristics.

Among these eight goals, what is interesting to discuss in this study are the articles 6, 8 and 9 respectively regarding the industrial tourism, the industrial heritage and the

industrial museums.

Again, what is interesting to notice is how industrial heritage is considered a resource which must be developed in order to create, within an industrial culture perspective and ideology, a series of economic and educational benefits to the society. In this case industrial heritage is specifically treated as a resource which can bring social benefits in spreading industrial culture and industrial spirit messages, and both increment the industrial tourism as economic circle and social educational moment along with preserve the historical architecture as memory of the national industrial development, driving force of an urban regeneration model. So that, the articles 6, 8 and 9 have to read together as interconnected key tasks which are depending on the national industrial heritage protection and utilization practice. For these reasons the art. 8 orders to "Continue to carry out the identification of national industrial heritage, publish the list of national industrial heritage, encourage local governments to conduct investigation, evaluation, and identification of industrial heritage at the provincial and municipal levels according to local conditions, and form a hierarchical protection and utilization system". The article then continues stating the necessity to revise the Interim Measures for the protection and management of industrial heritage and invites the Ministry of Industry and Information technology along with other governmental agencies²³ to carry on specific legislative researches to develop a more comprehensive legal regime for the protection of the national industrial legacy. These statements are very important since they are expressing a certain awareness on the weakness of the national juridical system ruling industrial heritage and claiming for a revision of the legal tools. This means that the industrial heritage discourse in 2021 arrived to a very mature point in which the academic and scientific researches arrived to positively influence the governmental action. As seen in previous chapters, many scholars²⁴ and professional figures complained on the weakness of the industrial heritage protection and management system, declaring many grey areas of the regulation which is lacking of consistency, clear evaluation and selection's procedure standards and coordination between different institutional legal responsibilities.

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²³ National Development and Reform Commission, the State Administration of Cultural Heritage, the State-owned Assets Supervision and Administration Commission.

²⁴ Xu 2012; Ai 2019; Li 2020; Han 2020;

The Implementation Plan for Promoting the Development of Industrial Culture (2021-2025), set a new chapter of the industrial heritage practice in China, clearly pointing out goals and objectives, learning from its own past practice and aiming for a future improvement. The article, in fact, continues inviting "to promote the formulation of protection guidelines, to establish specific practice rule and effective evaluation standards for the protection and restoration of industrial heritage along with promoting the development and application of key technologies".

Once clarified the goals on setting new rules to standardize the national practice to select and protect the national industrial legacy, the article then moves to its management and utilization process inviting to "coordinate the protection and utilization of industrial heritage and urban regeneration and transformation incorporating the industrial heritage of old industrial cities into the scope of urban policies to support the regeneration of old industrial cities combining the characteristics of local resources and historical heritage, integrating industrial heritage into the urban development pattern". To achieve these goals the article 8 encourages "the use of industrial heritage to build industrial heritage parks and industrial museums, to create innovative cultural entrepreneurial activities promoting new industrial touristic consumption places". This is the link to the articles 6²⁵ and 9²⁶ which respectively promote the development of industrial tourism and the improvement of the industrial museums system.

To conclude, the analysis of the *Implementation Plan for Promoting the Development*

²⁵ Art. 6: "Promote the innovative development of industrial tourism. Establish, improve and actively promote industrial tourism related standards and norms; support industrial heritage and old factories, industrial museums, modern factories and other industrial cultural characteristics to build various industrial tourism projects and create a batch of industrial tourism demonstration bases. Develop creative products for industrial tourism, create a batch of immersive industrial cultural experience products and projects, launch high-quality industrial tourism routes and build industrial tourism destinations. Support the collaborative and innovative development of cultural tourism equipment and expand the new spaces of cultural consumption. Guide the construction of relevant social organizations and activity platforms".

Art. 9: "Improve the industrial museum system. Give full play to the role of industrial museums in displaying history [...] explore the construction of national industrial museums, national digital industrial museums, support the construction of urban industrial museums with regional characteristics and encourage enterprises to build museums, industrial exhibition halls and memorial halls. Support the use of a new generation of information technology to create a digital, visual and interactive industrial museum. Explore the establishment of joint certification of industrial museums, joint construction and management mechanisms; publish the list of industrial museums, encourage participation in museum evaluation and grading and guide the cultural relics system to rich resources. Support the standardized development of industrial museums in terms of operation management, enrichment of collections, protection and restoration and open services. Create a number of new industrial museums; strength the professional training of workers, improve management and service levels and form a demonstrative and influential cultural brand of industrial museums. Encourage the use and sharing of collection resources, develop education, cultural and creative entertainments [...] and experiences promoting the research activity".

of Industrial Culture (2021-2025) brought some evidences which confirm the interpretation given by this study on the reading the Chinese industrial heritage protection and management practice within the Made in China 2025 program. The government's engagement in establishing a national practice to protect and reuse its industrial legacy is readable within the ideological and theoretical framework given by this study which finds its key concepts in strengthening the national soft power through the empowerment of the industrial culture. Industrial culture is the sum of both the industrial history and tradition of the country, visible also through its industrial heritage and spiritual culture formed along with the process of industrialization and permeated into industrial development. Industrial heritage is playing a key role within this system, which is both responding to urban and heritage necessity of preserving industrial remains and to promote a new urban governance through the use of industrial legacy and both is acting as main industrial culture carrier helping the development of the industrial tourism and industrial museums (bringing economic and social education benefits).

The data collected by the census confirmed these assumptions. Considering the relatively young system adopted by the country to protect and reuse its industrial legacy (2014-2021), the data related to the "heritagization" process of the industrial site are more than optimistic. According to the data collected by this study and elaborated by the database the 62,2% of the industrial heritage listed by the Ministry of Industry and Information technology has already been or it is in the process to be transformed into an industrial park or industrial museums. The data confirm that the engagement and the efforts of the central government in creating a national standardized model in protecting and managing the industrial heritage is already giving its fruits. And, if the standardize system is working, the industrial heritage will be able to fully play its social, cultural and urban role in achieving the goals foreseen by the *Made in China 2025* program and by all the policies and notices issued within its framework.

4.3 Adaptive reuse: Showcasing industrial heritage at the Beijing Olympic Games 2022. The case of Shougang

The adaptive reuse of industrial sites is seen as the most common strategy to preserve industrial legacy; the adaptive reuse of the industrial buildings is among the crucial issues tackled by the policies recently enacted by the government with the aim, not only to protect the national industrial legacy but also to turn it use into something economically sustainable which can better develop industrial culture's messages representing a benefit for the community. The rampant urban development growth and the transformation of China's industrial landscape since the Nineties had made industrial heritage adaptive reuse an urgent and widely discussed phenomenon. The beginning of the Chinese practice in reusing industrial building can be traced back to the middle of Nineties with, as we seen in Chapter 2 of this study, Shanghai and Beijing which introduced the first reuse projects for cultural purposes.

The begetting of the practice can be recognized as highly regional and local, missing a national attention and practice (Chen et al. 2016). Also, most of the national literature on industrial heritage adaptive reuse in China is mainly focused on single case studies or it is indagating the phenomenon through a local state lens (Han et Zhang 2020; Gao et Zhang 2020; Han 2020; Zhang et Han, 2018; Chen et al. 2016; Wang 2012; Wang et Jiang 2007).

As remarked by prof. Liu Boying during the interview (APPENDIX IV), the Industrial Architectural Heritage Academic Committee is the first academic organization for the protection of industrial architectural heritage in China; it was established in Tsinghua University in 2010, mostly with the scope to scientifically indagate how to rationally reuse the large discarded urban industrial remains in the context of a rapid urban growth. The practice of the adaptive reuse has firstly been indagated through the practice; at the beginning of 2002's, when the phenomenon became evident and largely developed all over Chinese's mega cities, there were no national regulations to guide the process. It was the daily life practice of adaptive reuse projects to lead the field of the industrial reuse (Han 2020).

As we saw in the previous chapters, one of the goals of the latest national policies is the adaptive reuse of the Chinese industrial legacy. Among the latest and most important project of industrial heritage adaptive reuse in China, Shougang Steel Factory is worthy to mention, not only for the undoubtedly outstanding project which combine conservation and reuse issues, but mostly because it represents the iconographic landscape of the just finished 2022 Winter Olympic Games.

Two years ago, in 2019, Shougang steel plant celebrated its first century of life. The centennial history of this industrial site reflects the central role Shougang has played over the years, assuming different identities. Founded in 1919, Longyan Iron Mine Company, the ancestor of the nowadays well-known steel group, was established under the influence of the 'saving the nation by engaging in industry' motto which saw, as consequence, a wave of setting up large-scale iron and steel industry enterprises all over the country (Bo, 2019; Cestaro 2022; Cestaro- Roux 2022). The design and the technology of the plant enjoyed the ideological thought which encouraged the development of a national modern industry to learn from the West (Bo, 2019; Cestaro- Roux 2022). Unfortunately, the construction work of the plant, which began in 1920, was almost immediately interrupted because of Northern Warlord turmoil. The plant was not put into operation until the Japanese occupation, registering the production of only 250,000 tons of iron from 1937 to 1945 (Cestaro, 2022). After the foundation of People's Republic of China, the site underwent to a restoration and saw a new development, preparing to be the stage for many "first" of the Chinese industrial history. One of these records is represented by a 30-ton oxygen top-blown converter, the first ever adopted in China, installed in 1958 after the site was renamed Shougang and expanded into a steel company (Qian, 2019). Along with the many technical improvements and developments saw by the site, a large number of residential areas were built around the factory to accommodate the families of employees (Bo, 2019). The large industrial site and the workers' residential area brought the development of infrastructures which contributed to strength the West-East axis of Beijing, in juxtaposition to the ancestral North-South axis, vector of imperial memories related to the Fengshui philosophy. The development of the West axis of the Capital, connotated of strong meanings related to the working-class values and to the industrial development of the New China, contributed to the affirmation of the urban development according to the newly established orientation of the city (Cestaro 2022; Qian 2019; Bo, 2019). Moreover, if talking about Fengshui, it is worthy and meaningful to notice how the West, according to the Wuxing- the ancient Five Elements philosophy-, is the cardinal

point representing the element of metal. Is not by chance, then, that Shougang had been planned to represent the western end of the Beijing horizontal axis, the perfect location for the development of the metallurgical industry of the capital [Fig. 4.10].



Figure 4.10 Position of Shougang Industrial Park within Beijing Municipality area. (Source: pag. 4 of the brochures "New Capital City Renaissance landmark in the new age" printed in 2019 and collected by the author during the event hold in the park in May 2019.)

Within the 2004-2020 Beijing Urban Masterplan, the "Two Axis, Two Belt, Multi Centers" project strengthened the development of the west-east axis as a physical and "ideological" extension of Chang'an Street (Qian 2019; Cestaro 2022; Cestaro-Roux 2022). Which better occasion to fully embody all these layers of urban meanings if not the one to represent the city Olympic venue of the 2022 Winter games?

After China's successful nomination for the 2008 Summer Olympic Games, in 2001 Shougang started to reduce the steel production, definitely stopping it in 2006 and relocating the activity. The result was a huge discarded industrial area, as a memory of a glorious productive past. The glory of the past quickly came back, when Shougang

started to be seen no more as an abandoned site, although as a precious industrial legacy: on October 2nd 2017, the Olympic Games Department of the International Olympic Committee send a document (Ref. n. 2017/ CHD/ PDY) via email to the Executive Vice President of the Beijing Organizing Committee for the 2022 Olympic and Paralympic Winter Games- Mr. Zhang Jiandong- in which it was approved the location for the Big Air Venue in Shougang Park. In the document it is specified that "The Executive Board noted on particular the exceptional post-Games legacy of the site and of the remarkable ambition supporting the renovation of the entire Shougang Park". Another item presented to the Executive Board were the plans for the sustainable development and post-Games use of Yanqing zone".

After Shougang was nominated as the venue for the discipline of the Big Air for the 2022 Winter Olympic Games, the site supported by a wave of industrial heritage protection and management policies' development, in 2018 was nominated within the First Batch of Chinese Industrial Heritage Protection List, jointly issued by China Association for Science and Technology and Urban Planning Society of China (Cestaro-Roux 2022). As showed by the census and the database, the site has not been listed to be protected at national level by the Ministry of Industry and Information Technology's list, but despite the official missed nomination, Shougang has attracted over the years the attention of scholars and professionals, becoming an iconic model of urban regeneration trough industrial heritage. The fact that Shougnag had been nominated among official lists by the academic institutions and not in the ones by the Ministry confirms the multilayers structure of industrial heritage's system in China as well as showing the prominent role of the China Association for Science and Technology and Urban Planning Society of China in promoting industrial heritage protection practice, along with demonstrating the weakness of the ministerial listing procedure which, as shown in previous chapters, is based on the voluntary candidacy of the site's owner.

Up to now, Shougang embodies a new model of urban regeneration with the advantages of both urban restoration and urban acupuncture strategies, having realized a complete transformation of the site, which is both conservative and regenerative (Dou; Bai; Pang; Zhang, 2021; Cestaro- Roux 2022; Bo 2019). The planning results of the industrial estate redevelopment reached world-class levels, winning many urban and

architectonical prices²⁷ which recognized the environmental values and endorsed the project as new urban regeneration model.

To realize what has been called a "cultural renaissance" of the discarded plant, around 4.9 billion yuan have been invested in order to promote a new high-quality development model and to foster a city governance able to build a new cultural landmark in the Chinese capital, changing also the rules of the real estate development of the area thanks to the rise of the land value of the neighborhood (Cestaro 2022; Cestaro-Roux 2022). The local government played a crucial role both in realizing an integrating transportation networks ²⁹, able to connect the new park to the city center, both in regenerating the industrial legacy promoting it as a new sample of a cultural and leisure complex capable to embody a new trend which is attracting young cultural and sport consumer generations.

Within the Shijingshan Zoning Plan (2017-2035) the regeneration project of Shougang steel factory is described as a "landmark reflecting Beijing's latest urban planning and a new governance philosophy; a landmark capable to develop new economies related to sport and culture; a regeneration model showcasing China's emergence as a new economic powerhouse and exhibiting confidence in its culture".

This "confidence" on national culture is showed explicitly in the transformation of No. 3 Blast Furnace into an enterprise historical museum [Fig. 4.11]. This is reflecting the will to confirm the high cultural value and the memory of the industrial site, while

in the Shijingshan Zoning Plan (2017-2035).

the author. The key words used by the flyer to picture Shougang are the same key words and concepts used

²⁷ Among the others, Shougnang Industrial park has been shortlisted by the Royal Town Planning Institute for "International Planning Excellence 2017"; it has been awarded the China Resident-Friendly Environment Award in 2017 by the ministry of Housing; it won the green Development Pioneer Award in 2017.

²⁸ From May 28th to June 1rts 2019, Shougang Industrial Park hosted the "2019 China International Fair for trade and service". The author had the chance to attend the event and to collect data and material. During the event Shougang Industrial Park was presented to the public as "The new capital renaissance landmark in the new age". The renovation of the site and the presentation of the 2022 Olympic venue for the discipline of the Big Air saw Shougang being defined as a "landmark showcasing cultural revival, ecological revival and industrial revival; a landmark reflecting Beijing's latest urban planning and new governance philosophy". These key words used o apostrophe the regeneration works in Shougang, were collected in flyers and communication's material distribute to the public during opening events like the one attended by

²⁹ Rail transit S1 line, the M6 west extension line, the light rail M11, and the Pingguoyuan transportation

hosting the 2022 Winter Olympic Plaza, the winter training center and the Big Air Platform, gave to the regeneration of the site a very sportive connotation (Pan; Ye 2019). The balance between the two dimensions of the memory and the regeneration accompanied by the introduction of a series of new commercial activities related to sport's experience, is presented as new industrial transformation model which is not only cultural and business oriented, but is a model looking to China's new life styles and to a diversified cultural consumption (Zhang, 2021).

Moreover, Shougang represents the first Olympic plaza to be hosted within an industrial heritage site, fact which greatly counterbalanced the critics received by the national and international audience on the economic wastes linked to the 2008 Olympic Games. This aim is greatly demonstrated by the key concepts used by the Shijingshan Zoning Plan (2017-2035) and recalled by the official promotion materials, to endorse the regeneration project as a "model for the practice of Olympic games fostering the city development" and again "a model for the practice of recycling industrial remains and reuse industrial estates".



Figure 4.11 No. 3 Blast Furnace transformed into an enterprise historical museum. (Source by the author).

The firsts studies for Shougang's regeneration already started in 2006, in a time, as seen in previous chapters, characterized by the begetting of the development of the

national industrial heritage practice. The transformation of Shougang Industrial Park is the most ambitious industrial heritage transformation project in northern China. It aims to return the century-old steel mill to citizen life, reconnect the city and Yongding River, restore the natural environment, and affect the urban area. The entire project was launched around 2010 and is scheduled to be completed in 2030 (Dou; Bai; Pang; Zhang, 2021). It includes a series of adaptive reuse and energy conversion projects, with sports, leisure, culture and other public projects as the engine. As one of the venue zones for the Beijing 2022 Winter Olympics, Shougang Park embodies the demands for a comprehensive sustainable project based on the adaptive reuse of industrial heritage.

As concluded by some of the scholars and professionals who took part to the project (Dou; Bai; Pang; Zhang, 2021), on a macro scale, the goal of Shougang regeneration project is to reconstruct the western skyline of Beijing and preserve the memory of the steel factory; on a long scale, the project pays attention to the Olympic movement in conjunction with the economic development of western Beijing and the industrial transformation and upgrading needs of industrial parks. The reconstruction and expansion of industrial plants reflects the response to the problem of protection and utilization of industrial heritage. The operation concept behind the project is to allow the four-season utilization, to balance the construction of the Olympic venue and the related facilities to serve during and after the games, and to open up the park to serve the city with cultural and consumption activities. In fact, the site proposes an alternative to the most common ways of industrial reuse.

The area of Shougang is divided in three parts, with the North condensing the majority of the heavy industrial structures such as furnaces, pipelines, silos and cooling towers, over almost three kilometers square (Cestaro-Roux 2022). This is where the BOCOG decided to set its headquarters in preparation for 2022, in an ancient silo renovated in 2014, thus associating already the steel plant with the Olympic Games [Figure 4.12].



Figure 4.12 BOCOG headquarter in Shougang Industrial Park in ex silos. (Source by the author). In 2019, Big Air platform30 was inaugurated, with a structure and colors designed to be as light as possible and to resemble a flying ribbon, as a landmark that makes a direct echo to Chinese culture and aesthetics [Figure 4.13 and Figure 4.14].

³⁰ The 2022 Shougang Big Air jump is the first stable platform of the discipline in the world.

In 2019, Big Air platform³¹ was inaugurated, with a structure and colors designed to be as light as possible and to resemble a flying ribbon, as a landmark that makes a direct

echo to Chinese culture and aesthetics [Figure 4.13 and Figure 4.14].

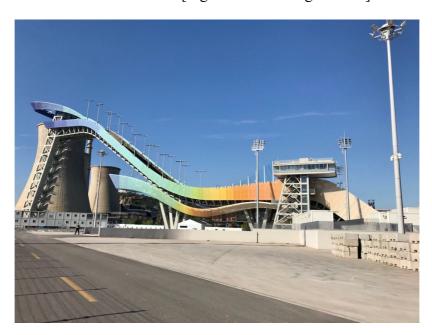




Figure 4.13 and Figure 4.14 Big Air platform in Shougang Industrial Park. (Source by the author).

 31 The 2022 Shougang Big Air jump is the first stable platform of the discipline in the world.

The big Air platform with the four cooling towers on the back, became the iconographic signature of this 2022 Winter Games, globally broadcasting industrial heritage as special venue for the Olympic games.

Within the urban scale of Shougnag industrial regeneration project, at the architectonical scale is worthy to mention the conversion of the main venue of what-back to the time- was the Oxygen Factory designed by Politecnico di Torino. China Room, a group of young researchers belonging to Politecnico di Torino, re-designed the industrial building and transformed it in to the venue to welcome the public to the Big Air competitions. In rethinking the Visitor Center the architects of Architecture and Design departments of Politecnico di Torino, kept just the skeleton of the old structure, emptying it in order to obtain a naked volume made of glass and concrete (Fig. 4.15). A special engineering structure has been projected by the Tsinghua Architectural Design and Research Institute in order to keep the structural skeleton of the Oxygen Factory to fill it with a new volume of glass and concrete and to suspended it from the ground to the scope to free the ground floor from supports and to create a covered public square to welcome the public of Big Air's competition. The project was conducted by the Department of Architecture and Design, with the support of the Departments of Structural and Geotechnical Engineering and Energy of Politecnico di Torino (Cestaro, 2022).



Figure 4.15 The Visitor Center within the former Oxygen Factory designed by Politecnico di Torino with the Big Air venue in Shougang Industrial Park. (Source by the author).

In a long-term vision, the Big Air will serve for training and development of winter sports industry aiming to spread itself among society. This venue, coupled with cooling towers on the background, forms a very peculiar landscape participating to the symbolic layers behind the choice to put Shougang under the spotlight for the Olympics (Cestaro-Roux 2022).

Pushing further away the limit between machines and human habitat, Shougang presents a renewed model in terms of both industrial heritage conservation and integration to urban planning strategies. Among the most interesting aspects of the regeneration project there is the use of industrial buildings, like warehouses and silos, converted to host human life and activities such as hotels, museums, conferences halls.

The depollution process lasted several years, time used to treat industrial buildings to prevent from rust, to meet the safety requirements for conversion and to align with official environmental concerns. In fact, this regeneration project is the result of specific strategies that serve political, economic and social narratives, one of them being the targeted sustainability and ecological civilization goals. In 2016, Shougang was recognized as a Climate Positive Development Project by C40, thus adding an international label to its transformation strategy. The steel factory is integrated to its surrounding landscape with the aim to reconnect it to the Qunming Lake and the Yongding River, enhancing the value of the blue axis for the capital city [Figure 4.16].



Figure 4.16 Qunming Lake (cooling pool) of Shougnag Industrial Park (Source by the author).

Shougang and Shijingshan district's planning documents put an emphasis on developing a low-carbon area and on building a "healthier ecological environment", as announced objectives by the 2019 BOCOG Legacy Plan. This narrative is then embodied by large urban planning decisions, echoed by urban furniture: the recycling bins we can now find across Shougang are designed like industrial pipes, associating industrial aesthetics and environmental concerns, strengthening the imaginary of sustainability up to the very last details of the site (Cestaro-Roux 2022).

The site is also presented as a future strategical node for the mega-city region development, or the "West gate of the capital city", according to the Shijingshan Zoning Plan (2017-2035). Transport infrastructures, from subway to highway, now integrate the former steel factory into an efficient network linking the city center by only 20 minutes of travel. As a new pole, the entire project of Shougang will offer a mixed-use area to develop the west suburb of Beijing. On top of illustrating industrial culture and memory, the idea behind valorizing such a site is also recalling the high quality of industrial know-

how in China, integrating it into a developed consumption-based economic model. More than an industrial park showing the expertise in heritage conservation practice, Shougang aims to be an attractive city within the city, both for citizens and tourists, in a multi-

functional – and yet sustainable – environment, which represents a unique example for a large industrial site. If the Olympic Games did not determine its fate, they certainly participated to broadcast Shougang's renovated image at the national and international

scene.

4.3.1 Shougang Industrial Park between memory and social value

Besides the intrinsic historical, scientific and architectonical values embodied by Shougang Steel Factory, what really distinguished the newly inaugurated Industrial park is the social value which is enshrined by the site.

To the scope of really catch the multilayered meanings guarded by the site in light of the fame it gained after the Olympics, the author interviewed Li Youran, a sport operation manager of the Shougang Sport management company, member of the BOCOG and responsible of the Big Air venue in Shougang Industrial Park, during the 2022 Winter Olympic Games. The complete interview is in Appendix V of this study.

Her memories and personal involvement with the life of Shougang are very precious testimonies of the many identities that this site represent to the community.

Li Youran knows very well the site since it was the background of lots of childhood memories. Her father was a manager of Shougang Steel Factory. Her first memory of the site is related to the iconic chimneys and to the cooling pools- the Quming Lake and Xiu Lake- inhabited by ducks: "to me Shougang is not only a steel factory. It's kind of village. Once there, it was used to be produced food. What I remember is the Shougang bread and the Shougang sparkling water. It's not an exaggeration to say that, still today, a lot of people remember these two products". Li Youran was not living within the industrial complex, she was living with her family in a compound very close to the factory's facilities: "there were many residential neighborhoods around the factory, for instance the Third Jindingjie residential quarter, the Fourth Jindingjie residential quarter and so on; nobody lived inside the factory" she told. Although at the time of Li Youran's memory the factory was not structured in *danwei*, the company was providing a lot of facilities for

the workers and their families: "The company has tried its best to improve workers 'families life. Shougang Group was providing and producing everything from the food, to the clothes - yes, it had its own garment manufactory. I remember there were big stores, our first vacuum cleaner, for example, came from there. The factory's staff was very numerous and everybody who was working in Shougang was living around the industrial site and was joining the facilities".

When China won the bid for the 2008 Olympic Games, Li Youran was 9 years old and she perfectly remembers how the decision to relocate the production of Shougang affected the life of her family: "to be honest, when the production stopped and relocated it did affect my dad. My dad, at the time, was a manager, and he had to deal with the big problem of re-organize the job positions of all the workers he was responsible for; the problem was that the majority of the workers came from small villages, not far from Beijing or from the suburbs of the capital, so they didn't want to be relocated too much far away. His duty was to make sure that everyone could have a decent life in respect of their wills. He has tried his best to figure out how to relocate their positions, I think he had sent plenty of workers to different training sessions. He spent a lot of time on that, sometimes he ignored me".

On the transition period which saw the relocation of Shougang, there are other interviews taken to key people working in the factory which are worthy to mention here. In 2014 Dai Li the General Manager of Shougang Park Comprehensive Service Company, was interviewed by the reporter Yao Yongmei (2014). Dai Li shared significant memories on the relocation period which are important to reconstruct the daily-life which contributed to build up this industrial legacy.

At the beginning of 2000's, Shougang began to relocate, some employees went sent to Caofeidian, the site of the new steel production and some employees stayed in Shijingshan. The General Manager Dai Li said to the reporter: "In July 2013, Beijing Shougang Park Comprehensive Service Co., Ltd. was established. In order to make employees having full confidence in the company and in themselves, we organized trainings in order to everyone to understand the new trends of Shougang reality, its reform and its development project. We introduced the company's work arrangements so that everyone can broaden their horizons, think about the overall situation and recognize himself in the new identity of the company".

As confirmed also by Li Youran, the core activity of human resource management of Shougang was to mobilize and give full play to the enthusiasm and creativity of all employees, trying to create a new and fair working environment for all the workers which were living the transition. Shougang Industrial Park was not only committed to relocate the old employees form the steel factory, but, creating new job positions, the company also hired the family members of the former workers. That it was what happened to Li Youran who, just after her graduation in 2017, she had a job position in Shougang. Two years later, in 2019, she was chosen by the group as a staff member of the BOCOG: "my position is sport coordinator, I was assigned to Big Air venue; according to the job description my responsibility was to coordinate the competition works during the preparation of the venue and during the competition itself; I was responsible to contact stakeholders of the venue, to coordinate the preparation of the venue and the equipment procurement and emplacement. To me it was both an honor and a big responsibility, I have two identities: manager of the venue staff and staff meber of BOCOG, I need to switch between two identities at the right time, it was part of my job and I guess I managed it quite well. After the Games, I will come back to Shougang Park and I will be responsible for the sport operation department".

In asking her opinions about the adaptive reuse project which saw the regeneration of Shougnag Steel Factory and the western portion of Beijing urban fabric, Li Youran talked about the relation between the industrial park and the former workers: "I've met several old workers here in the park. They used to work in the factory before and now they come here very often to have a walk or to enjoy the new industrial spaces remembering all the days they had spent here working and living their life with their families. They know this factory more than us. They would like to introduce this factory to every visitor who doesn't know the place, they like to explain the site to the visitors. My family thinks that this is a nice place which has been part of our life and which will be still part of our days. The industrial park definitely improved and will continue to improve the level of services in this area of the city: there will be a shopping mall, an extreme sports park, in the future there will be a cinema, an exhibition hall and so many other facilities. It is an add value to Beijing society, to the community. There are very few interesting places in the west part of Beijing and Shougang Park will be the hotspot for the memory of the workers and for the future generations.".

CHAPTER 4 INDUSTRIAL HERITAGE IN CHINA

The social value is the value attributed by the community, is the value which mirrors how the community feel and experience the site. For the site of Shougang it can be said that the social value is very vivid and it is felt as the value belonging to the local community which previously was living and working here. According to Li Youran, this is what made Shougang regeneration project so special, because its tranformation gave the site back to its own community.

CONCLUSION

Heritage Values, China's development path.

The aim of this research is to describes heritage processes, rather than to demonstrate models. In describing heritage processes, in particular in reconstructing the complex path made by China to define a standardized national procedure to protect and reuse its industrial legacy, heritage values resulted one of the most important issue.

As demonstrated by the first part of this study, the drafting process of the two China Principles's project editions opened and enriched a long and precious debate on heritage's values. Only when the range of heritage's values was clarified and the theoretical framework of the significance of the heritage was strong enough, then it was possible to proceed with the evaluation and the identification of the industrial sites in order to label and protect the ones which reflected the officially recognized values, within a process of institutionalized heritagization. As stated by Sharon Sullivan during the interview released to the author, the majority of the discussion raised during the drafting process of China Principles emerged on the understanding and acceptance of the social value. The revised version of the Chinese charter brought key changes which mirrored the important evolution in values made by China in cultural heritage understanding. Among the main changes approved by the 2015 edition of the China Principles, the inclusion of social value, identified as one of the major heritage's values, brought to an enlargement of the evaluation heritage perspectives which now include a larger typology of the heritage sites. The acknowledgement path of the cultural and social values is part of the heritage process that the thesis wanted to enlighten: the academic and scientific debates on the heritage values which began within the framework of the China Principles project, were supported over the years by the Chinese government, which organized forums and institutional occasions to bring the debate to a political level. Among the initiatives, the most important was the Wuxi Forum, organized from 2006 and 2012, which mainly focused on new categories of cultural heritage. The acknowledgement of the social and cultural values enhanced the valorization of sites that before were not considered as part of the national heritage, so that the industrial heritage emerged as a proper label of the heritage,

answering the evolution of the institutionalized values' understanding over the years. Industrial remains, having different characteristics from cultural sites, required time to be understood and institutionalized within a standardized protection and administration system, it required the time of the institutionalized heritagization¹ process as intended by Fontal and Gomez-Redondo (2016). The basement of the heritagization system is represented by the common ground in understanding the evaluation basis to identify the industrial heritage, so- once again- it is represented by the values.

This thesis demonstrated the long process made by China in finding this common ground in defining its industrial heritage, form the very beginning of the issue. The reproduction of the historical path and the development of the legal and administrative regimes for cultural heritage were an essential premise which allowed first to root the industrial heritage discourse within a wider legal, ideological and historical framework and secondly it gave the author the possibility to find in the evolution of the values the lens through which read and explain the formation of the industrial heritage protection practice.

Values are at the basis of the evaluation process, they represent the prelude to the identification of the objects to look at, to list and to protect. If China would have kept only the historical, scientific and artistic values as references to navigate and to coordinate the entire field of the national heritage, the emergence of industrial heritage as category of legacy difficultly could have happened. Whit the engagement of China to the international heritage debate and the acknowledgement of the social and the cultural values at the basis of the heritage discourse, the industrial heritage emerged as a necessity which, first, it needed to be defined in order to, secondly, be protected in the times of a rapid urban growth.

The 2015 edition of *China Principles* counted, among its merits, the fact that the social and cultural values had been added to the value-basis of the Chinese heritage

¹ In this study the concept of "heritagization" is understood, as theorized by Fontal and Gomez-Redondo (2016), as cultural phenomenon shape and embodied by different agents. "It is both a process and a product where both things are built simultaneously —a product that is not a material output but a cultural node, a set of norms, conducts, beliefs, attitudes...that develop and acquire meaning in a heritage setting" (Fontal and Gomez-Redondo 2016). Considering all the discourse on industrial heritagization in China indagated by this study, the heritagization of industrial legacy is conceived as "a construction of heritage- not only in terms of physical provision but in terms of attribution of meanings" a heritage legitimized by institutions which is built on legitimized values recognized by these authorized institutions.

CONCLUSION

discourse, having further enriched the categories of China's cultural heritage. With regard of the new typologies of heritage sites included in the charter, the art. 1 recognizes as heritage all the "the immovable physical remains that were created during the history of humankind and that have significance; they include archaeological sites and ruins, tombs, traditional architecture, cave temples, stone carvings, sculpture, inscriptions, stele, and petroglyphs, modern and contemporary sites and architecture, and historically and culturally famous cities, towns and villages together with their original components. Cultural landscapes and heritage routes and canals are also deemed to be heritage sites" (ICOMOS China, 2015). This implementation of the heritage categories is strongly connected to the new values understanding and contributed to enlarge the national cultural legacy enhancing the principle of the cultural diversity. So that industrial heritage officially emerged the following year, defined as "industrial relics that are formed during the long-term development of China's industrial history which have high historical, technological, social, and artistic value" definition proposed by the Minister of Industry and Information Technology and by the Ministry of Finance within the Guiding Opinions on strengthening the development of Industrial heritage. The definition of the industrial heritage was later enshrined in a legal regime, in 2018, by Interim Measures for the Administration of National Industrial Heritage which maintain that designation. This confirms, what stated by other authors,² that the theoretical debate on Chinese industrial heritage is an "active process of interpretation" which values' evolution is shaped by the daily life conservation practice. It is no possible to read the evolution of heritage process in China without keeping an eye on the development of value debates. The theoretical background built by this study followed the evolution of the ideological and political discourse on industrial heritage, which found a common ground on the values through which evaluate and identify its historical, artistic (architectonical), scientific (technological) and social ones.

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² See Lu, Liu and Wang (2020)

Lacks and weakness of the industrial heritage system in China

The industrial heritage protection practice in China is a fragmented and multigovernmental layered system. Given the prominent role of the Ministry of Industry and Information Technology, there are other governmental agencies which are taking part to the process. While for the cultural heritage there is a very clear structure which stays under the control of the State Administration of Cultural Heritage, the industrial legacy is managed by a multilayered system related to different ministries which are not always coordinating the operations between them. While for the cultural heritage protection and management system the practice is solid, its jurisdiction is clearly attributed to the State Administration of Cultural Heritage and its legislation is ruled by the *Relics Protection Law*, it not can be said the same for the industrial heritage. The *Interim Measures* are not an effective and sufficient tool to rule the entire system.

It has to be said that, despite the enormous development of the interpretation process, mirrored by a prolific political activity in promoting policies through which China translated the theoretical debate into a standardized national practice, the industrial heritage protection and management system is still showing some weak points. One of the weakest points is the evaluation basis of the identification system. Of course, all the theoretical frame built over the years by academic and scientific discussion brought to a common understanding of the values to attribute to industrial heritage, but this has not been accurately translated into a specific regulation which exactly guide the selection of the sites. The Interim Measures for the Administration of National Industrial Heritage simply recognize the values to attribute to industrial heritage (historical, technological, social, and artistic value) and let the identification process been promoted by the owner of the industrial sites, on the basis of the correspondence of their industrial remains with the values, requiring the evidences of these values and having an on-site verification made by not better specified experts as final evaluation stage. The system- as it is now ruled by Interim Measures- is a voluntary-basis system which is not effective to the nomination and listing mechanisms. Moreover, the spontaneous candidacy combined with the lack of proper funds might preclude the will of private owner of industrial sites to candidate their discarded plants since the burden of the heritagization process seems to weigh on the owner's economic possibilities. This system creates an evident discrepancy between the

CONCLUSION

industrial heritage sites which are candidates: as shown by the database (Appendix V) more than the 90% of the listed heritage sites are central state or local state-owned. The percentage resulted on the basis of the available information found by the author, but it is possible that the totality of the industrial heritage sites listed by the Ministry of Industry and Information Technology could be state-owned.

Although the application of the site candidacy, as demonstrated by the census, is often promoted by scientific organization which collaborate with the Ministry of Industry and Information Technology (such as China Association for Science and Technology³ or the Urban Planning Society of China⁴) a more precise evaluation basis procedure should be regulated by the law.

Given this system, it has to be noted that some important sites are missing from the official lists published by the Ministry; for instance, Shougang Steel Factory, the site chosen in 2017 by the International Olympic Committee⁵ to host the Big Air discipline during the 2022 Beijing Winter Olympic Games, has not been listed by the Ministry yet. As seen in the last paragraph of this study, the absence of Shougang from the national industrial heritage lists sounds very contradictory in light of the strategic importance of the industrial area- turned into an Olympic venue- and the massive investment made by the local government in promoting the regeneration of the site into the new cultural landmark of the Chinese capital. Nevertheless, in 2018 Shougang was nominated within the First Batch of Chinese Industrial Heritage Protection List, jointly issued by the China Association for Science and Technology and Urban Planning Society of China. Although

³ China Association for Science and Technology is the largest non-governmental organization of scientific and technological professionals in China which serves as a bridge to link the Communist Party of China and the Chinese government to the country's science and technology community. It was founded in 949 when a number of the national scientific and technological organizations gathered to dedicate all their efforts to the building of New China. (http://english.cast.org.cn/col/col471/index.html).

⁴ Urban Planning Society of China is a non-governmental institution founded in 1956 with the scope to gather urban planners across the People's Republic of China under one legally registered academic organization at state level. (http://en.planning.org.cn/upsc/).

⁵ On October 2nd 2017, the Olympic Games Department of the International Olympic Committee send a document (Ref. n. 2017/ CHD/ PDY/gdx) via email to the Executive Vice President of the Beijing Organizing Committee for the 2022 Olympic and Paralympic Winter Games- Mr. Zhang Jiandong- in which it was approved the location for the Big Air Venue in Shougang Park. In the document it is specified that "The Executive Board noted on articular the exceptional post-Games legacy of the site and of the remarkable ambition supporting the renovation of the entire Shougang Park". Another item presented to the Executive Board were the plans for the sustainable development and post-Games use of Yanqing zone".

the site has not been nominated by the Ministry of Industry and Information Technology's official lists, Shougang has attracted over the years the attention of scholars and professionals, as an iconic model of urban regeneration through industrial heritage. This is an evidence of how a much more coordinate and scientific identification work between scientific organizations and ministerial agencies should be promoted and regulated by the law in the next future.

These aspects of the industrial heritage system seem to have already hit the attention of the central government which, in May 2021, published a new document, the *Implementation Plan for Promoting the Development of Industrial Culture* (2021-2025), in which the eight governmental departments⁶ signing it, criticize the current legal and administrative regimes of industrial heritage, calling for the necessity to revise *the Interim Measures* and inviting the Ministry of Industry and Information Technology along with other governmental agencies⁷ to carry on specific legislative researches to develop a more comprehensive legal tool for the protection of the national industrial legacy.

Once again, it can be said that China's heritage discourse is constantly evolving both theoretically and pragmatically on the basis of an active process of interpretation and self-evaluation.

Status quo of industrial heritage in China

The census and the database elaborated by this study offer a picture of what are the objects of the industrial heritage in China, presenting a picture of the industrial sites listed and protected at national level by the Ministry of Industry and Information Technology. The first evidence is that the total number of the industrial heritage sites selected at national level is 1648.

⁶ The Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Education, the Ministry of Finance, the Human Resources and Social Security, the Ministry of Culture and Tourism, the State-owned Assets Supervision and Administration Commission of the State Council, the State Administration of Cultural Heritage.

⁷ National Development and Reform Commission, the State Administration of Cultural Heritage, the State-owned Assets Supervision and Administration Commission.

⁸ As already declared in Chapter Four, it has to be said that we should add other 30 sites which have just been selected in 2021 and published on the *Fifth Batch of National Industrial Heritage Recognition and Application Work,* released on December 15th 2021. Despite the fact that, due to time limit reasons, this fifth list is not part of this study and census, it is worthy to mention that the updated number of industrial sites protected at national level is 194

According to the maps elaborated in the last part of the study, the north-eastern regions of China are confirming their strategical relevance in representing the driving force of the national industrialization progress whit, surprisingly, Sichuan at the podium of the national lists, presenting the highest concentration of industrial heritage sites. As already explained, this data is understandable by a closer perspective. Large part of Sichuan's industrial sites selected by the lists are belonging to the so called "Third Front Movement" which represented a huge industrial development plan launched by China during the sixties with the aim to develop the weakest regional economies of the country. Southwest China (including Sichuan, Chongqing, Yunnan, and Guizhou), was one of the pilot areas of the economic plan which aimed to industrialized part of China's most rural and agriculturally based zones.

At a national scale, the geographical distribution of the industrial heritage sites is representing all the territories of the country: almost all the regions are included in the national lists, except for Inner Mongolia, Ningxia and Guangxi regions and the island of Hainan.

As enlightened by the third chapter ¹⁰ of the study and according to official documents ¹¹ and to scholar's researches (Que 2008; Ai, 2019; Liu 2020) the history of China's industrial development is commonly divided into four main phases: the first period refers to the establishment of the traditional Chinese handicrafts during the ancient times which preceded the development of the modern national industry; the second period, characterized by the "Westernization Movement" begins with the Opium War (1840) and last until the end of the Qing Dynasty (1911)¹². The third historical and technological phase of the national industrial development is represented by the few decades between the end of the imperial time and the foundation of the People's Republic of China (1949);

according to the lists issued from 2017 to 2021 (MIIT, 2021).

⁹ See the important contributions on the Thir Line industrial heritage remains given by the scholars: Tan (et al. 2019) and by Zhu (2019).

¹⁰ See Chapter 3, paragraph 3.1.1: "Industrial Heritage: values and historical categories".

¹¹ Guiding Opinions, Interim Measures and Interpretation of Interim Measures.

¹² This period brought China to the next stage of its industrial development: starting from that date, through the all sixties of the Nineteenth century Qing government has led the way to the with military technology's update as main objective; this period can be regarded as the start of China's industrial civilization.

while the fourth, and last stage of China's industrial development sees the foundation of the modern country (1949) and lasts until the early eighties with the beginning of the economic reforms (1982). According to this "standardized" periodization and, in light of the foundation's date of the listed industrial sites, the census and the database demonstrated that almost half of the listed national industrial legacy belongs to the fourth phase of Chinese industrial development. The 45% of the total listed industrial heritage (74 sites in total), are enterprises founded between the 1949 and the beginning of the economic reforms (1978). As shown by the results of the research, the majority of the sites belonging to the Fourth Period (1949-1982) of national industrialization process, are sites established between 1953 and 1960, embodying the historical importance of the "First Five-Year Plan" (1953-1957) and of the 156 Key National Projects program, developed with direct aids of the Soviet Union¹³. This means the great significance which the begetting of the modern industrial system is still playing a prominent role in the ideological and cultural narrative of the country. As demonstrated by the data, a large part of these enterprises is located in the North-eastern regions with Heilongjiang and Beijing which detain the majority of them, confirming the statistics- previously stated by important studies¹⁴- on the industrialization process of the New China¹⁵.

The rest of the listed industrial sites are historically distributed as follow: the sites belonging to the First Period (ancient times- 1939) of the national industrial history are representing just the 9% of the total; the Second industrial Period (1940-1910) is exemplified by the 20% of the listed sites; the Third Period (1911-1948) is embodying the 26 % of the total. From the point of view of the industrial typologies, the First Industrial Period is mainly represented by sites which reflect the achievements of smelting, casting, salt making, and distillation process in the history of Chinese

¹³ The "First Five-Year Plan" (1953-1957) was issued by the direction of the Central Committee of the Communist Party of China (CPC) presided by the Premier Zhou Enlai and Chen Yun. Adopting the soviet economic model, China planned to build 694 large and medium-sized industrial projects as pillars of the new socialist industrialization (He; Zhou, 2015).

¹⁴ Among the others, Ai Zeike (2019) reported that in 2013, 58 modern industrial heritage sites where listed among the Seventh National Key Cultural Relics list announced by the State Administration of Cultural Heritage. Among these modern industrial heritages, 53 are located in the coastal cities along the central and eastern coasts, accounting for 76.8% of the total; 16 are located in the western cities, accounting for 23.2% of the total.

¹⁵ In particular with the distribution of the of the 156 Key national projects and the additional 694 key large and medium-sized industrial enterprises developed during the "First Five-Year Plan".

civilization; while the Second Industrial Period (1840-1910)- being economically speaking characterized by the so called "Westernization Movement" or China's "Self-Strengthening" movement- resulted portrayed by enterprises reflecting the historical context of a moribund Qing Dynasty which is hardly trying to self-strength its economy, political power and military industry, modernizing the country through western technologies and knowledge. The listed enterprises are mainly related to the use of natural resources (coal and gold mines, cement caves and an early oil company), to the construction of railway system, to the building of modern docks and shipyards and to the establishment of the early basis of the national industrial system for the consumer goods and food production (textile sector; cigarettes; beer; flour mill; vinegar). Once again, the geographical distribution of these sites is mainly concentrated in eastern regions with Liaoning, Hebei and Jiangsu detaining the majority of the heritage of this second stage of industrialization history of the country.

According to the data collected by the author the sites belonging to the Third Industrial period represents the 26% of the Chinese national industrial heritage and A large part of the enterprises founded between the end of the Qing Dynasty (1911) and the foundation of New China (1949), are related to the heavy industry sector, to the power production, to the military industry and to the consumer goods sector; these sites are largely represented by companies which gave a crucial support to the Anti-Japanese Resistance War (1937-1945) and a great contribution to the development of the military industry.

Generally speaking, the study confirmed the trends of Chinese Industrialization history both from the point of view of the historical geographical development of the national enterprises along the for industrial periods, both in terms of industrial typologies representatives of the different historical stages. In terms of industrial typologies, the research shows that the largest voice of the listed industrial heritage sites are referring to raw material enterprises (22%) represented by mines, oil companies, cement caves and metal alloys; other two strong assets of the historical national industry are represented by the heavy industry and by the military and aerospace engineering, both of them embodying the 12% on the total composition of the Chinese industrial heritage sites, followed by power plants representing the 10% of the total. Worthy to be mentioned is how the traditional Chinese products- symbols of the millennial cultural history of the

country- are sharing important percentages of the industrial heritage sites. The traditional Chinese cultural products enterprises, such as the one producing silk, porcelain, paper, ink, brushes, tea, cloisonné goods, are representing the 15% of the industrial heritage enterprises listed at national level, significantly being the second bigger category of industrial heritage after the raw material industries.

Other two key data emerged as significative to portray the *status quo* of the Chinese industrial heritage: 24 of the listed industrial heritage sites, before to be classified as industrial heritage, they have already been labelled as national key cultural relics; so that, the 14% of the national industrial legacy is under the jurisdiction of both the administrative system of the Ministry of Industry and Information Technology and the one ruled by the State Administration of Cultural Relics.

The second data which is very important to consider is that, according to the availability of data reached by the author, 102 industrial heritage sites resulted to have already, or they are in the process to, been turned into museums or industrial cultural parks; this means that at least the 62,2% of the registered national industrial heritage sites is part of an heritagization process, a very impressive percentage if considering the young age of the industrial heritage protection and management practice of the country.

Broader significance of Industrial heritage in China

Within the theoretical and ideological framework proposed by this study through the analysis of the official documents and policies issued by governmental agencies, the research demonstrated how the industrial heritage has been recently considered by the central government as a resource which has to be developed in order to create, within an industrial culture perspective and ideology, a series of economic and educational benefits to the society. Over the years, and more explicitly in the last document *Implementation plan for promoting the development of industrial culture (2021-2025)* the industrial heritage is specifically treated as a resource which can bring social benefits in spreading industrial culture and industrial spirit messages, and both can increment the industrial tourism as economic circle and social educational moment along with preserve the historical architecture as memory of the national industrial development, driving force of an urban regeneration model.

The government's engagement in establishing a national practice to protect and reuse its industrial legacy is readable within the ideological and theoretical framework given by this study which finds its key concepts in strengthening the national soft power through the empowerment of the industrial culture. Industrial culture is the sum of both the industrial history and tradition of the country, visible also through its industrial heritage and spiritual culture formed along with the process of industrialization and permeated into industrial development. Industrial heritage is playing a key role within this system, which is both responding to urban and heritage necessity of preserving industrial remains and to promote a new urban governance through the use of industrial legacy and both is acting as main industrial culture carrier helping the development of the industrial tourism and industrial museums (bringing economic and social education benefits).

The data collected by the census confirmed these assumptions. Considering the relatively young system adopted by the country to protect and reuse its industrial legacy (2014-2021), the data related to the "heritagization" process of the industrial site are more than optimistic. According to the data collected by this study and elaborated by the database the 62,2% of the industrial heritage listed by the Ministry of Industry and Information technology has already been or it is in the process to be transformed into an industrial park or industrial museums. The data confirm that the engagement and the efforts of the central government in creating a national standardized model in protecting and managing the industrial heritage is already giving its fruits. And, if the standardize system is working, the industrial heritage will be able to fully play its social, cultural and urban role in achieving the goals foreseen by the Made in China 2025 program and by all the policies and notices issued within its framework.

Innovation of the research and future perspectives

This study offers an innovative research methodology which portrays the complexity of the Chinese industrial heritage contemporary phenomenon combining qualitative and quantitative approaches within a strong multidisciplinary framework, filling a scientific gap- within the international industrial heritage literature- on the Chinese practice, which is here indagated through different scales. The study, in fact, not only shows the contemporary *status quo* of the Chinese industrial heritage practice thanks to an update

CONCLUSION

census of all the industrial heritage sites listed at national level, but it also offers a reading of the Chinese industrial heritagisation experience adopting different perspectives to read the process, intertwining the international and transnational lens, to the local-state one, to the national level perspective. The Chinese industrial heritagisation experience is indagated through this study as a peculiar practice which originated from localgovernments experiences, often adopting international practices as models, and evolved into a national standardized procedure, responding to the specificities and needs of the Chinese heritage and urban context. Considering the evolution of the Chinese practice and its intertwining development through transnational contacts and local experiences, the methodological approach adopted by this research makes use of different scales to read the Chinese industrial heritage phenomenon. The beginning of the practice is read through an international lens in order to clarify the transnational actors and models which contributed to the evolution of the Chinese heritage values understanding. Adopting an international perspective, it was possible to reconstruct the international debate on heritage joined by China starting from the eighties and to recognize, in some specific scholars, the key actors which contributed to the progress of the Chinese theoretical framework and practice on cultural heritage. Once the values adopted by the country have been clarified, the research adopted a local perspective, focusing on the local government practice at the beginning of the 2000's. At the end of the narrative process- in reconstructing the cultural and industrial heritage development path in China-, the research assumed a national perspective lens to read the begetting, the formation and the results of the industrial heritagization practice in China. Moreover, the census and the database not only represent an update picture of the contemporary Chinese industrial heritage, but they also serve as documents to witness the ongoing heritagization process.

The quantitative analysis, giving back a precise picture of numbers, typologies, ages and geographies of the Chinese industrial heritage, also act as a parameter to measure the heritage phenomenon attempting to offer some directions to read the process which, it has to be stated, is a new and an ongoing process. In a future perspective, this study could be seen as a precious tool to read and re-interpret industrial heritage practices in China. The intersections of disciplines and approaches adopted by the study, together with the

CONCLUSION

intertwining of perspectives assumed by the author portrayed an inedited¹⁶ reconstruction of the Chinese industrial heritage protection and management process which will be able to act as useful tool to understand the peculiarities of the Chinese phenomenon among the international industrial heritage studies field. In a future perspective this study could be seen as useful tools to further indagate the Chinese industrial heritage phenomenon, working as an updated general background where to contextualize single study cases using a local-state interpretative lens or where to put forward studies on sustainable urban planning through industrial heritage regeneration projects, studies more dedicated to the designing aspects of the regeneration of industrial heritage or researches on industrial tourism development.

The theoretical frame and the database could be seen as helpful instruments to further indagate the Chinese industrial heritage, tools which could help to develop studies directed to different semantic field of the complex phenomenon. The spectrum of the industrial heritage field in China is very large and in the latest years attracted the attention of scholars and politicians, with some delay if compared to the international debate on the field and international development of the studies. The research aims to represent an efficient tool, a lens through which read many other aspects of the Chinese industrial heritage to further expand the understanding of the national practice and its innovations.

The thesis, in its complex, is describing and documenting an heritagization process which is happening now in China, it is recording a new phase of the heritage in China and it is filling a gap in the international industrial heritage literature with a case, the Chinese one, which- seen in a transnational perspective- could be used as new reference of industrial heritage practices.

¹⁶ The study offers a large quantity of inedited data, inedited translated documents and an inedited perspectives and contents given by key actors of the Chinese heritage debate interviewed by the author.

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APPENDIX I

Interview to Neville Agnew and Martha Demas

Transcription of the phone interview with Neville Agnew and Martha Demas from Getty Conservation Institute held in December 16th 2019.

Interviewer: When does it is possible to contextualize the very beginning of the collaboration between Getty Conservation Institute and China?

Agnew Neville: When we began with China Principles we have been working since a very long time in China, since beginning of 1989. For five years we had been working in two sites: at Mogao Grottoes in Dunhuang and at Yungang Grottoes in Datong. After five years we stopped to work in Yungang because it was too demanding from the point of view of many logistic issues: travel, time and, lack of heritage professionals in the staff which would have made impossible to sustain a remote partnership. After five years we had a conference¹, a moment of evaluation of the partnership between China (State Administration of Cultural Heritage) and Getty Conservation Institute and we decided to focus our activity only at the Mogao Grottoes site which could have offered a more sustainable partnership under the supervision of the Dunhaung Academy.

Interviewer: How was the first approach in working with Chinese Institution at that early stage of the heritage conservation discourse?

Agnew Neville: At that time, end of Eighties, it was not easy at all to work with Chinese government and in China in that field of studies. At that time, it was clear that one of the things that was mostly needed in China was the management practice. We start to work with some colleagues of Australian Heritage Commission, Mrs. Sharon Sullivan

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¹ The conference "Conservation of Ancient Sites on the Silk Road" held in 1993 at Mogao, brought together specialists from the West and East to discuss common problems on conservation (Site Conservation at the Mogao and Yungang Grottoes, 1990-1995 https://www.getty.edu/conservation/our_projects/field_projects/sitecon/index.html).
See also Agnew and Kezhong 1993.

was the Executive Director at that time and she set up at Yungang, a training course for us on management.

Interviewer: Why Burra Charter has been chosen as model for the China Principles? And what about the involvement of Australian Heritage Commission?

Agnew Neville: The Burra Charter was a good model for us because it has one single principle on the concept of conservation of cultural heritage: to preserve something of value that is a place, a site, a thing whatever, all kind of conservations not only related to its artistic value. To respect the conservation values. Australia set down Burra Charter as an instrument of the ICOMOS Australia and it became very widely adopted in Australia and internationally as well. Burra Charter takes in consideration what Venice Charter does not take on contract since Venice Charter it is too much towards architectural heritage. Venice Charter was not entirely suitable because in Australia most part of the heritage is intangible heritage so they developed their own charter drawn upon previous charter like the Venice one. And we thought, this was a good model. Our Getty Institute team had a strong relation with Australia Heritage Commission so we brought in them because they had a lot of experience having developed the Burra Charter. It was a kind of natural fit. Sharon Sullivan was for a long time a colleague of us. That was the connection that brought us together. So, we invited the Australia Heritage Commission to be our partner and the State Administration of Cultural heritage agreed on this. The Deputy Director at that time, Zhang Bai, in Beijing supported this and he formed a team that comprised people, experts from China including people working on Mogao Grottoes and in Qin Dynasty Summer Palace and others together with Sharon Sullivan and representatives from AHC and so the first draft was done. So, the first draft was done by four main institutional actors: Australian Heritage Commission, State Administration of Cultural Heritage and Getty Conservation Institute and China ICOMOS.

Interviewer: What can you tell us about the very beginning of the project? How was the involvement of China ICOMOS?

Martha Demas: I think we can say that China Principle project started around 1996-1997. The Chinese institutional representatives were aware they needed a sort of document to guide the national conservation practice. At that time, it was Wang Shiren an architect no longer practicing, who had already started to develop ideas on such a document based on Traditional Chines practice on conservation. The very beginning of the idea has to be attributed to him and not to China ICOMOS. China ICOMOS at that time, was at its very early stage and it was still very connected to State Administration of Cultural Heritage, China ICOMOS and SACH were basically the same thing. In trying to take a kind of lead and independence from SACH, China ICOMOS was involved and started to work in China Principles since the very beginning of the project becoming a more serious and autonomous organization over the course of the last two decades. Being an NGO, it took a long time to be approved by Chinese government that why the long delay.

Interviewer: Talking about difficulties, which were the main ones you faced working with China at that early times?

Martha Demas: We were working with a governmental entity so they were making sure whatever it was done on the document had to be in line with the law and regulations. Our Chinese partners were taking care about this aspect.

Agnew Neville: It was a very early stage to work in China on such topics, but we already had credential to work in China, having worked at the Mogao Grottoes site before to start China Principles project; so I think that was the key, that was the secret, that was why they brought us in, because we had a trusting relation with them. But we had big discussion about many issues. The issue of the values was among the biggest differences in understanding that emerged during the project: which values to articulate on the document. Within Chinese Law texts, just three values are mentioned as attributed to heritage: artistic, scientific and historical. The big discussion arose around the new

typologies of heritage values brought by the Burra Charter, used as model to draft China Principles, especially the social value. That was something that Chinese professionals working with us were not feeling comfortable on. So, they didn't want to add this value to the document of China Principle. That was a stumbling block and the way they solved it was to use the phrase of "benefit to society". That phrase changed in the 2015 revised version of China Principles in order to increase and enlarge the idea the idea of values. There were many things that we had to debate, even the name of the document. First, we proposed "China Charter" after the Burra Charter, but they said that we could not use that name because the translation of "Charter" into Chinese is understood as "Law". Since the Principles were not intended to have a legal value - China already had a law on heritage-we could not call it a law in order to don't create problems, so we proposed "Principles" and that was accepted.

Interviewer: What about the workshop (1997-2000) between Australia-China-United States?

Agnew Neville: That was organized in order for the three partners to really work together, to understand what conservation and management meant to each other's, to see practical examples on the field work. We needed to understand issues related to conservation and management of sites in China and they needed to have a better understanding of the international practice. So that was the idea behind the workshop.

Martha Demas: We went to visit different sites in China over the period of the three years: we did a workshop in Australia to see sites there and to talk with professionals there. It was a chance to understand how they work there, to meet people related to Burra Charter, to comprehend how they manage the sites. We did another workshop in United States and it was an occasion to enhance the reciprocal understanding in approaches and languages. In United States we visited sites related to the idea of opening up the concept of what is usually considered- with particular reference to China- Cultural Heritage. We went to memorial sites, to industrial heritage sites and to scientific sites.

Interviewer: Language is the main research and discussion tool in a project like China Principles. How did you manage a common understanding of the heritage related concepts between Chinese and English?

Agnew Neville: Language is very important. There was a lot of discussions over terminology and that's why we came out with the Glossary. We think it is a very useful tool, a part of the document itself. The translation has been a very difficult thing to carry out, since there were a lot of chances to misunderstand when working with such different languages as Chinese and English. We didn't have any professional translator but we did it by independent scholars. There were open discussions and everybody had comments about translations, it was incredibly difficult.

Interviewer: When did it come up the idea to revise China Principles? Who promoted it?

Martha Demas: The revision of China Principles, was much more a Chinese process; we, as Getty Conservation Institute, were involved in a much lower level and Australian Heritage Commission was no longer involved. When China ICOMOS initiated the revision, we thought it was good they took the lead. We, later on, organized a workshop also for the for core-members of the committee charged with the revision process. The aim of this workshop was to explore the concepts of historic cultural landscapes, living heritage sites, memorial sites, cultural routes, and industrial and scientific heritage, in somehow to expand the idea of what is considered heritage. Within a program of site visits, meetings and discussions, we brought them in Hawaii, to visit the famous memorial site of Pearl Harbor and then to scientific sites here in Los Angeles together with other kind of historical sites. So that was the basis of the workshop which lasted two weeks. We had also many more other meetings, but not as many as we had during the first draft of China Principles. The beginning of the revision started around 2010, exactly ten years after the first version of China Principles (2000) was published. China had ten years to think about how to use that set of rules, how to implement it and at this point, they were ready to enlarge the thinking about it.

Agnew Neville: It was China to have the idea to revise it and we have been invited. We were encouraging to do that, we were hoping they were to revise it. We knew the first version was pretty conservative, it was just the first step and they needed time to expand it and after ten years they were willing to do it.

With so much more experience working with international organizations like UNESCO and ICOMOS, dealing with international world, China was definitely ready.

APPENDIX II

Transcription of the phone interview with Sharon Sullivan from Australian Heritage Commission, held on April 7th 2021.

Interviewer: When does it is possible to contextualize the very beginning of the collaboration between you representing Australian Heritage Commission, Getty Conservation Institute and China?

Sharon Sullivan: During the Eighties I was working with Getty Conservation Institute, I was giving courses on Management of Rock Art in Los Angeles. One of the people was giving lectures was Agnew Neville. At that time, I already knew him because he had been in Australia before. Then Neville started work in China specifically in Cave Grottoes, the cave temples. The Chinese asked him to help them with a lot of things, among them they asked him to help with the issue of management. The sites were very well looked after by guardians but that was the time in which China was opening up a little more and the people who were looking after the sites really did not have any experiences in managing touristic sites. For that courses I was giving in US, I was using Burra Charter as framework and methodology.

In late 1980's when I did the course in Los Angeles what I did was we got people over two weeks to write. We went to sites, we looked at them and we wrote a management plan. We mostly worked on values. We got four different groups and they wrote four different plans and then we debated.

We had three courses structured like this in Los Angeles, based on Burra Charter methodology. The first time I went to China it was during the early Nineties. Neville, who had been working with China since some time- invited Chinese parties to send a delegation to follow the third course in Los Angeles. Because they need to know how to work with management. And this was the very single management course that Getty was running. And it was focusing on Rock Art, which has some associations and similarities with the cave temples. So that, two Chinese professionals came to attend the course. They went home and they reported on it to their bosses. They gave to Neville a very good feedback, and they told him they would have liked the course adapted to Chinese sites.

So, Neville and me arranged to run a course in Yungang. There were few young promising archeologists attending the course, willing to enter in the conservation and management system.

We gave that course and, for a better understanding, we translated the course in Chinese language. The book, composed by the series of lectures given to the management course, had been printed in 10.000 copies. So the contents had a very big As the management course in Los Angeles, also this one in China was based on Burra Charter methodology and Chinese really liked it to the point to say to Neville they would had like to adopted it. And I remember very well that Neville said to them: "You don't want to adopt it. You should adapt it, you should write your own charter because you have a very different tradition. That's why Australians wrote the Burra Charter, so you should write your own. At that time, I was at the head of Australian Heritage Commission and we worked with the GCI for quite a few years to do that. That was how Australian Heritage Commission, GCI and Chinese get in contact, and was beginning of Nineties.

Interviewer: Why Burra Charter has been chosen as model for China Principles?

Sharon Sullivan: When Australia ICOMOS was founded we looked at Venice Charter to see how it would fit to Australian practice. We discovered a lot of differences in practices. Venice Charter was more for all that sites which have no longer a community related to it, which have a no longer traditional use. In Australia we have a very different typology of heritage, we have much more recent heritage and in, general, in Australia people have a different way to think about heritage.

So basically, we took the Venice Charter and we thought it was more appropriate to look for all the values and not just for the ones a group of scholars thinks a site is thought to be important, we thought it would have been important to involve all the stakeholders related to the site in order to fully understand its value. So, we came up with Burra Charter, a very simple charter based on the principle that you must look for all the values which the site has and not just the ones you think it has or the ones that an architect or a scholar thinks it has. Burra Charter was so important in Australia because it was responding and fitting to the local context, aims which Venice Charter could not satisfy since it was written to protect the antiquities of the past, like Greek and Roman remains, and it makes

look monuments like frozen by the time. Venice Charter was based only on the three "traditional" values: historic, aesthetic and scientific ones, values which were not fully fitting to Australian conservation needs. because it was on the idea that it was not a good idea to reconstruct or restore sites, weather to keep its historical conditions.

We thought it was important to involve all the stakeholders who might have a different view about the values. Values are important and you must think about the thighs which may should fit to these values and they will be things u will put into your plan and what you have to do is to come out with strategies to look after all those values as much as you can.

Interviewer: How was the first reaction and acceptance of Burra Charter by Chinese heritage professionals?

Sharon Sullivan: One element of the Burra Charter which attracted the Chinese at the beginning of the discourse, was that you have to discover all the values which that site represents to the society and then you manage it according to that. This means that if you have a temple which used to be repainted over the years since Ming Dynasty, for instance, then you would repaint it, because the values that Chinese civilization places on the temple is related to the fact that the temple has to be wiped and shiny, as sign of respect. Of course, this is something which attracted a lot of discussions in Europe. Because European thinking is based more on Venice Charter, so they didn't want the temple repainted. I remember this happen when we went to visit the birth place of Confucius and we met the site's manager. He was a very intelligent man and he said to us that everybody was telling him he could not repaint the temples' walls. So, he didn't touch for sometimes the heavy paint of the wooden walls (which it had also a protective function) and many visitors, "accusing" him to not look after the temple properly and was giving him money to repair the temple as it used to be in order to pay respect to Confucius. What I am saying is that what Chinese realized was that they could have use methodology of Burra Charter and blending it with western theories on conservation. They could have both conserve the temple while honoring traditions.

That was at the very beginning of the discussion and it was good because Chinese could understand that one of the most important rules of Burra Charter is: you must take into the account your own values.

Interviewer: Do you think that Burra Charter methodology has some political relevance in decision making process?

Sharon Sullivan: Sure. It is a tool which allows to make decisions in a coherent and transparent way. The issue which makes Burra Charter politically relevant is its principle according that values must be identified before to decide on the site's management. It means that you have to take into consideration all the values to see if there would be some of them which could be impacted by tourism, for instance. And if you are working with the government or if you are a consultant you have to try to ensure that the government will keep separate the statement of the site's significance from what it intends to do with that place. Because, if government has control over it, what politicians often want to do is heritage advisors to say that the site it is not very important, so they can proceed with their own intent (which could be built a highway or a mine or project like this). These are the cases which we use to define as land use conflicts. The identification of the values is something that allows decision makers to take coherent decisions on the destination of the site. All governments should agree on this point of the Burra Charter. And if the government then decides for whatever reason they need a mine or a highway, at least they can make the decision in a transparent way and in a way in which all the values are known rather than a governor getting up and saying "oh it is not very important, and therefore we can destroy it", this is the way to find a mitigation between stakeholders.

It is not to say every site will be saved and not touched at all. If you look at the Burra Charter, it depends much on which values are considered. And in some cases, you need to touch the place and you need to restore it, because it can happen that one of the most important values might be the site's association with the community and its use. For example, if you have an old hotel that is there, since its first settlement, from 1820, one of its value is that in all that time it has been an hotel. So, if u want to preserve that value, you have to make some changes in order to let it to be run as hotel, according its original use.

Interviewer: How was the understanding of Chinese partners of Burra Charter values?

Sharon Sullivan: They understood that it was a very good methodology quite immediately, especially the scholars who attended the course. They were young promises and they immediately understood the importance of the values-based system. But, for us it was important that also senior bureaucrats understand the contents. That's why we had 5-4 years of discussions, because senior heritage professionals, in charge to writhe the charter were not convinced about Burra's methodology and they haven't been to the management's course. The work that we did the following years was about to organize a huge number of debates during our workshops about differences on methodology between Australia, China, and America. And that was amazing for all of us, not just for the Chinese. We all learnt something new.

Interviewer: Who had the idea to organize the workshops around Australia, United States and China? And how did it go?

Sharon Sullivan: We needed senior bureaucrats and decision makers to be together for a while. We knew that if we went to China and wanted all of them to participate, it was something impossible because they would have been involved in other thousand issues around the Country. So, Neville who really had a deep understanding of Chinese society, had the idea to travel around the tree countries. In that way it was possible to have all the senior bureaucrats gathering together for few weeks without being distracted by other things, involving them in real life cases. That was the occasion for them to see how sites were managed by the other countries partners and it was possible to create a mutual cultural understanding. The workshops were a privileged time to only talk about China Principles, a special occasion where all decision makers could really focus just on the writing of the charter.

It was very important to have created that occasions. Travelling all together as a group, having all the moments just reserved to one mission without being distracted by other obligations.

And we also have a lot of good memories, for instance Miss. Fan always shouting at

Neville because he was so slow because he wanted to take a look to everything. But Neville was never shy and I always knew when he was about to castigate Chinese colleagues for one reason or other. He was introducing his arguments by saying "we are all old friends here." And when he used to come up with this expression, we all knew he had to say something to someone. But he was always able to be absolutely charming. He felt there was not a point in not being frank and he pushed as far as he could the bilateral discussion, because he saw people from both the sides was very committed.

Interviewer: Which were the main issues discussed during the workshops?

Sharon Sullivan: I first have to mention that the major contribution of the Burra charter is that it added the social value. And that is where a lot of debates evolved around and our Chinese colleagues tried very hard to understand it perfectly. When they came to Australia and to America, they saw the strength of that value. But, even if they fully understood it, they were worried about its meanings in China at that time. Social value meant "value to the community". And they said that they understood it but I remember they clearly said that: "that's fine but you know what local municipal authorities will recognize in social value, a value to the community and they will use it to gain thousands of tourists; they will rebuild the site to make it look beautiful to ordinary visitors". That's why they were very worried to mention social value among the charter: they were worried about the interpretation of social value by local municipal authorities. The State Administration of Cultural Heritage, working at national level, at that time was not very powerful, and it wanted a westernization of the sites to have more visitors. Moreover, we are talking about people who lived the Cultural Revolution in their youth and who related social values something linked to the community. My reading is that senior heritage professionals understood the importance of social value, but they were worried to explicitly put it into the charter because of the different ways in which it could have been interpreted by local authorities.

Interviewer: Do you think that the worry to add "social value" in the first China Principles edition had some relations with the decentralization of the administration

system?

Sharon Sullivan: In somehow yes. There is a different understanding of what community means in China, it has different connotations. There are diverse willing and interests between local authorities and central power's one, but this happens in all the countries. For instance, referring to Australia as federal state, there could be a local state interested in having more people to come to central Australian to practice rock climbing, but this interest is in conflict with the local national interest which would rather prefer to protect the environment. Gain, we are talking about land use conflicts. The social value thing, is really important because it allows you to say the social value is the value of the original owners, the aborigines people, the value that the original community identify and attribute to the site. Recognizing this would mean that preserving the social value of the community is much more important than having climbers form Switzerland, for instance, which come with an aim to climb the rocks. That's why we were debating on social value and I think it was fully understood by Chinese scholars, but in China, at that time, social values could hide other dangerous connotations.

Interviewer: At that early stage were there any misunderstandings in working in heritage conservation in China?

Sharon Sullivan: I wouldn't say we got misunderstandings, we rather had very extensive debates. And they were very powerful debates but they were very well accepted on both sides. We were all heritage professionals and that was very clear. And the debates were very animated sometimes. But we both learned. And during debates Neville and Zhang Bai were fabulous leaders, they were both people who were very interested in intellectual debate and were really able to tackle their own ideas.

To give you some glimpses of the debates I tell you some memories I have. We did a master plan at Mogao Grottoes, and I still remember about the power of the debates Miss Fan Jinshi. And not just the power of conservation professional, there was a real political power in that debates too. She could say "According to the World Heritage, and according

to Burra Charter you cannot put an ashtray in the middle of my site". She was not only an heritage conservation professional, she was a political woman who was getting also her political point. She was saying that to Neville's assistant, in the venture of Getty conservation institute, who was a very powerful women, coming from overseas. Saying to very important heritage people things like the one of the ashtrays, had very important meanings to clarify positions during the debates.

And again, I remember another powerful moment. Me and Kirsty Altenburg from Australian Heritage Commission were so much into the discussion of social value. We were working on in Mogao master plan and we started doing visitors survey. We designed the survey with the guides and we got the guides to do that. We were asking Chinese visitors questions like: "what do u think about guards' attitude is like?" "What about the toilets?", together with their thought about conservation issues. We tabulated all the answers and we presented Miss Fan Jinshi. After 10 minutes of silent, she said "How dear you?" We had to explain her that people complained about the toilets and we were rather hesitant to tell her the truth, but, considering that it was a service visitor were paying, we needed to be frank. We came back six months later and no paying for the toilets, there were people cleaning and fixing toilets 24 hours a day. That was just a tiny example of the ability of Chinese heritage professional's understanding after the debates.

Interviewer: Looking back at the entire China Principles project process, which are in your opinion, the elements that allowed the success of this long-term collaboration?

Sharon Sullivan: I would say that to ensure this kind of results, you need a very long association, a mutual understanding and a mutual trust. Because if some ask you "please come to China and help us to write a plan" and then he goes away, it doesn't work. You firstly need trust along with good managers at the sites and a long-term vision. Neville was very fortunate to be able to get the funds form the GCI for all the years of the collaboration. In my view, the most important thing in China is to built up a trustable relation and find someone who can continue the process. You need to create a social change unless you haven't done anything, and GCI understood that: the solution was to create a legacy.

What Getty did in China is the best project they have done in the last 25/30 years because they left such a legacy. They really made a cultural change, in my vision. Getty really had understood what Marta and Neville were doing with their leadership, they were changing the world of the heritage conservation.

As second element which allowed the success of the collaboration was the involvement of the senior people and expert. We had the possibility to directly collaborate with the senior Chinese heritage professional figures. Even if, at the very beginning, this was not understood – I remember Miss Fan who firstly did not agree on having senior professionals attending courses-, after two years of discussion, suddenly everybody was there attending courses and discussions. And was a significant thing if you want to write something that is going to really work.

As third thing, I would say that, despite Chinese bureaucratization, they accepted to keep China Principle a simple tool and not to writhe hundreds of rules. If u just follow simple principles, you don't need rules for every single thing. You just need to ask yourself: "What the values are? Will this thing – the ashtray for instance in the middle of the site- affect the values? Answer Yes or No, and once you got the answer then u don't need to have a rule saying the ashtray has to stay 20 feet away from any site.

Interviewer: Can you describe the impact which had China Principles on heritage conservation practice?

After the China Principles were published, we test them in two masterplans we did in Chengdu and Mogao sites. Chengdu ended up to be a very difficult site where to work because managers were really not committed and there were many other difficulties, so we did Mogao Grottoes masterplan which became an outstanding example for Chinese heritage practice, kept as reference. So, after China Principles drafting process, what really reinforced the principles was the adoption of the ruls on a real site. Miss Fan wrote some papers after which really made us understand she really was on board and she fully get the meanings of the process. All the heritage professionals who were involved in China Principles process begun to do things according to the charter becoming very influence and important people in writing plans in China. I think that one of the most important switches after China Principles adoption was on site management. Just consider

that, when we first went to China, visitor managers were not part of the employers. At the site there were archeologists and scientists running the site, having at the reception, people with no back ground, no training (it did not exist a training to develop this professional figures). Lot of the employees were retired army people because there was big emphasis on security; Chinese were worried about people stealing stuff rather than looking after visitors. There was absolutely no consideration of visitor's managers as a professional thing (but that was happening everywhere I worked in the world). So, one of the things that has change immensely has been the visitor management and people's understanding. The last conference I went in Mogao lot of heritage professionals were giving papers on managing visitors and related management problems. They finally realiazed that if you employ people who are prepared and trained on management that could change the perception of the site itself.

I also think that China Principles based on Burra charter had a profound international impact, which let value base management be an excepted new methodology which bring the community together.

Interviewer: Can you tell us something more about the China Principles revision process?

When Chinese decided to revise China Principles it was because they thought the 2000 edition was not completely suitable to the contemporary needs. Younger Chinese heritage people felt it was not still not their own charter. That was exactly what all of us really wanted from our Chinese partners.

It was more a Chinese process that international debate, they felt the need to do it. It can be seen also a little influence on the Chinese legislation itself. It cannot be denied that China Principle had an impact on the national heritage legislation regime and some of the principles got enshrined by the law. For China the most precious thing its gain from China Principles process, is the awareness: they re-write the charter because the really needed. They understood that you can always manage a site according to the values of your culture and in the same way you can write laws and regulations in a way that your culture will understand.

APPENDIX III

Insights on the bottom up practice: interview to Huang Rui

Born in 1952 in Beijing, Huang Rui is nationally and internationally considered one of the pioneers and among the well-known representatives of the Chinese Contemporary Art. He was a founding member of the groundbreaking Chinese avant-garde group The Stars in the late Seventies. Inspired by Modernist thinking he began to explore the language of abstraction in painting and in 1979 he co-organized the *Stars Art Exhibition* in Beijing, where he showed for the first-time abstract canvases. The exhibition is widely regarded as the starting point of the contemporary art in China.

After the early Eighties reforms and the opening up of the country, in 1984 he decided to move to Japan spending 15 years in experimenting spatial abstractions and ink techniques enlarging his repertoire of works and approaching Chan Buddhism. Returned to China in 2002, he early embraced the 798 case. He was among the first artists to move in the discarded industrial site and to lead an active artist movement against the destruction of the site and promoting its regeneration in an art district².

Huang Rui released an interview to the author in December 2021 in Beijing, giving insights on his active engagement against the destruction of the site and telling his personal experience as key actor of the bottom-up process which saw the conversion of 798 into an art district.

Interviewer: In 2002, when you just came back from Japan, you were among the first artists to rent a space in the Dashanzi Districts spaces. Could you tell more about this moment? What pushed you to move there?

Huang Rui: I first arrived at 798 in January 2012, being introduced there by the Ai Wei Wei's brothers and some artist friends. It was because I insisted on finding a factory, as at that time Ai Wei Wei had already rented and built a space in Cao Chang Di. He established a model for artists to live and work but I had only one idea- and that was to

² The information about the artist have been collected by the author through the interview and through the visit to Huang Rui's personal exhibition in Beijing: "Huang Rui: Ways of Abstraction" held in Ucca Center for Contemporary Art in 798 Art District from 2021.9.25 - 2021.12.19.

find a preexisting industrial space. There were some things that happened in the past that influenced me. I participated in some activities in NY SoHo and visited the industrial art districts of Berlin and Amsterdam. So, I had a strong urge to live in an old building and make my art since I strongly felt the studio should come from the reconstruction of an historic industrial space. I was very, very excited when I found 798, thinking it was the perfect exemplar of a space completely faithful to industrial standards. But of course, there were some difficulties that had to be dealt with.

Interviewer: What was your impulse and motivation to start an art district?

Huang Rui: In Spring of 2002 I signed my first contract to rent a space in 798 and the renting contract was lasting only 3 and a half years. The factory communicated to me that by 2006, the space I used was to be definitely demolished. 798 was a huge area, so it was to be demolished in zones over a significant period of time - all to build new residencies. I understood this was their plan, but I could not agree with it, because it would have not been beneficial for the city. So, I thought to rely on my past experience and create a strategy to convert this industrial district into an artistic one.

Interviewer: Was it easy at that time (in 2002) to rent a space in 798? How was the relationship between artists, creative entrepreneurs and the Seven Star Group?

Huang Rui: In 2002, when I arrived at 798, it was extremely easy and cheap to rent a space. The space I rented was 60 cents (RMB) per square meter a day. If I remember correctly, when I just signed the contract, my monthly rent was just 1200 RMB. To me, it was not much pressure. At that time there were many uninhabited, abandoned factories which could have been rented by anybody without any further conditions. For example, if a space was rented to an artist, the next-door space could not have been rented to a tofuseller. At that time, I was among the first independent artists to rent a space, to convert it and to live there. Pretty soon, because I had clear ideas about the space, I invited a very good friend of mine from Japan, the owner of Tokyo Gallery. He also did a space in 798 right next to my studio and that became the Pace Gallery. Over this time, many artists heard from word of mouth and came to see 798. 798 was already well known before, so

this fame became a snowball and slowly the space became known among the locals and grassroots media. By the end of 2002, roughly there were 30 artists living and working in 798. We had good relations with the property management of 798, because we were their golden goose. It was only later we dealt with the Seven Star Group as the Group controlled a large part of the art district. Initially it was not very pleasant dealing with the Seven Star Group.

Interviewer: How many other artists were having their studios there at that early times and how was the art community at that time? What represented 798 in that period compared to what it embodies now?

Huang Rui: Because our rental contracts were quite short, we all had varying degrees of investment. Every artist wanted to benefit from being in a group, so whenever we had some public programs, the artists would enthusiastically respond. In 2003 there was SARS at the time and we were promoting anti-SARS workshops and programs, gaining the recognition and the attention of the media. After the SARS epidemic, the pressure from the Seven Stars Group about the art district increased a lot. But, facing this helped only to strength our will to obtain the approval of the city. For this reason, we held the Dashanzi International Art Festival. The festival was organized in two main units: one unit was about artistic projects held by artist invited by the organizing committee; the other unit was represented by open studios. I remember, at that time, every single artist was willing to participate and to hold open studios. By 2005, the art district still did not gain the city's approval. But that time registered the peak of artists residing in 798, with more than 70 artists living in the industrial space. Nowadays, I believe, no more than twenty have remained there, most of them moved away. Currently, only through close cooperation with the Seven Stars Group we are allowed to hold public programs in the name of the art district.

Interviewer: Could you share with us some memories about early times in 798? How was working in an industrial heritage context?

Huang Rui: At the time I was very productive and it was a period of new works and a new way of living for me. But, my personal time was too short - about 2/3 of my time was spent trying to find official and legal support from the city's municipality to save 798 from destruction. I stayed there for 5 entire years, even if I had already received a rental termination notice from the Seven Star Group. I fought against it for 4 or 5 months, but it was becoming too exhausting for me, so I moved away. At that time I made some art works which closely addressed pressing social issues, represented by a series titled "China-拆那" - it was one of the most time and energy intensive pieces of that period.

Interviewer: When exactly started the tension with the Seven Star group? When did they start to demolish buildings in the district?

Huang Rui: When the Tokyo Gallery opened in 2002, many people came from different from all over the city and from different social ambiences. The opening had over 1000 people attending. This was a shock for the Seven Stars Group. With the support of the 798's property management, I erected a billboard on the main road of 798. So, I gave the entire district an identity and a name, which was "Beijing 798 Art District". This was a declaration and an attempt of independence. Of course, Seven Stars was unhappy and forbid us to use the 798 to brand the art district. For this reason, from 2002 until 2007 we only could use the name "Dashanzi Art District".

Interviewer: When was Thinking Hands founded? Who were among the firsts to promote it? Can you tell something more about the group?

Huang Rui: Thinking Hands was founded in 2004, after the first Dashanzi Art Festival was facing financial difficulties. Its original aim was to provide Dashanzi Art Festival with legal and financial support and possibly to gain some sponsors as well. When it was founded, Thinking Hands published some art books on 798. At the time Thinking Hands had some frequent artists in the office, it was all because we wanted to

organize, participate and publish things related to the festival. The office itself wasn't an art studio, I was the chief creative officer, while Li Jing was the CEO and there were some people in accounting, design and two coordinators and project managers.

Interviewer: What was the impact of the first edition of *Dashanzi International*Art Festival? Which was the reaction of the Seven Stars Group? Could you please tell something more about the festival, about tits original ideas, how it was organized? Which results do you think the festival brought in winning the battle again the demolition of 798? Did you expect it would have risen the social consciousness about 798?

Huang Rui: At the time, every occurrence of the festival had a theme. The first was Beijing 光音/光阴 (Light Sound/ Light Dark) the second, 语言/寓言 (Language/Fable), the third, 北京/背景 (Beijing/Background), 易/移 (Yi/Mobility). The themes were reflected in the different units of the festival; the first unit was based on artist's production and included open studios as we discussed before. The second unit dealt with urban issues, so that, we organized different forums and talks on urban problems and architecture. The third unit, at that time, was something of very diverse and vibrant, something that is hard to see nowadays, it was an interdisciplinary intersection of artistic languages. For example, we held gallery shows with dance, experimental theater and public art intertwined with street circus and experimental music. As a truly grassroots led example, it was very different from the art festival, shows or biennials we have today in our contemporary socio-economic moment. So, these diverse and unrestricted interdisciplinary movements cannot be seen today. However, there is a point I would like to discuss more: the dialogue we introduced regarding urban issues. It was something that was not present in arts festival of the past. Rather, it was our fate: under the threat of demolition we did have no choice but to address it to a large discussion to involve the local society. We had to discuss issues of cities and urban development with a large audience. Hence, we contributed to the debate with our views and we developed the notion that cities are a diverse ecosystem rooted in time, progress, interaction and mutual habitation. It is an ecosystem in a process of continuous development, incorporating both modern and contemporary architecture and cultural memory. After this forum and discussions, we have collected many texts and

photographs.

Interviewer: Could you tell something more about the project Reconstruction 798? And how did you come out with the idea, in that very early time, to write the collective memory of 798 space within the book Beijing 798?

Huang Rui: Reconstruction 798 was something we developed because 798 was itself rich in history. After the founding of New China, 798 was among the first government supported industrial projects. At that time, it was internally known as the 718 United Factory and externally as the HuaBei Electrical Factory. The original plant was designed in cooperation with East Germany, through an agreement signed between the premier Zhou Enlai and premier of East Germany. The plant experienced the entire historical development of China from its founding to the Eighties. At the end of Nineties its industrial machinery resulted outdated, the production was stopped and the space was abandoned. So that, through Reconstruction 798 we wanted to revitalize the history of the factory to provide it with a second life, to adapt it to the contemporary needs. Not only, but we also wanted to promote its quick and cheap conversion in an art district. This was something which we believe it would have worked, something already happened in industrial contexts in America and in Europe. This was especially true for 798 as it was originally designed by architects belonging to the Bauhaus School and hence the factory's inherited in its DNA the ideals of the Bauhaus. Being an example of an extraordinary industrial heritage, its conversion to an art district could have bear the weight of upholding contemporary artistic ideals and therefore revitalize the history.

Interviewer: Which were in general the roles of the artist and of the art community in protecting the 798 area against the demolition?

Huang Rui: To protect 798 from its scheduled demolition, in spring of 2004 we - the artists and the art community of 798- formulated an heritage conservation plan and presented it to People's Congress Representative. The representative was Li Xiangqun, who was an artist himself. This plan was passed on, introduced by Beijing's People's Representative and discussed in 2005. In 2006 the plan was approved by the Beijing

Municipal Government. I believe the most important factor was the background of upcomig 2008 Olympics. Under such circumstances, 798 had the alignment of "heaven, earth and human". Of the international context, not including the support of the Olympic Organizing Committee, the Beijing Municipal Government also introduced a slogan "New Beijing, New Olympics" (新北京,新奥运). 798 was seen a positive case in supporting this slogan. Another key factor was represented by the many artistic programs we organized. We invited many influential people the international art scene and political world to visit them such as the Belgian Queen in 2005, the EU Commissioner in 2005 and in 2007, the German Chancellor in 2004, the French President in 2007. They openly declared support to our program and through their diplomatic channels helped us to sustain the conservation of 798.

Interviewer: Talking about nowadays which is the role of artists and galleries in 798 now? What has changed so far? What does 798 represent to you now? How do you see its future?

Huang Rui: An art district without artist studios, without galleries, is simply false. Only when is there a group of artist studios, when art-making is directly visible through the transfer by the second-order and first-order markets - we say the gallery is the first-order market - only then the art district can become an urban phenomenon in the cultural realm. In Beijing having such a large population and being a cultural center, it becomes a necessity. You know we have a saying about Beijing, "See the Forbidden City, Check out 798." This was something proven in 2019 when 798 registered more visitors than than the Great Wall. I just heard from the 798's new management, in 2019 they received 9.600.000 of visitors.

798 is not represented by the physical space it occupies. It is not only embodied by its small community with its own social issues, it is also a nexus within the city that reflects the city's contemporary art, design and cultural consumption. 798 is therefore engaged with multiple topics and it bears a larger pressure. Its ability on bearing such a pressure can be said the cubic power of the community's volume. The current challenge is the tension between management and the tenants. Still, I am positive about the future of 798, if it can persist in being a main part of the city's development, it can naturally gain

the vitality required to sustain itself. 798 has its own history, grassroots led project of conversion and preservation - all this originates from the heart, from the times, form human power and, if supported by governmental policies, it would result in a stronger vitality.

Interviewer: As main key players of the bottom-up process in preserving and regenerating such an important industrial heritage, do you think that the process you and other artists led would be replicable in other industrial heritage contexts? Could it be considered as a model of the industrial heritage conservation practice in China?

Huang Rui: For sure 798 represented a model which has spread widely in major cities in China. We've seen many samples of this kind of converted old industrial sites into art districts. Some appeared to be quite successful, while others resulted to be too forced. Most of the art districts have been commercialized - this an unavoidable solution. I believe some parts of 798 can be referenced and possibly replicated, however 798 has unique resources which limit its applicability - it has some excellent artists, international galleries and within China, one of the top museums. It also has sponsors from the international art world. These conditions are something which only Beijing 798 has. Other cites might not have these kinds of beneficial resources and advantages. Ultimately the case of 798 is limited to 798. It is a model and a way of thinking, akin to the historic Bauhaus and has already become a type in history.

APPENDIX IV

Liu Boying is a Professor of Tsinghua University, School of Architecture, Chairman of the Industrial Heritage Committee under Cultural Relic Academy China. The author interview the professor in Beijing, in February 2022.

Interviewer: Being a one of the most important scholars and one of the first professional figures in China working on industrial heritage, when do you think national industrial heritage protection practice has entered a new stage? When can be traced the turning point which made industrial heritage an urgent issue to look at?

Liu Boying: I started to understand the industrial heritage in 2004 after undertaking the International Urban Design Competition after Chengdu Seamless Steel Pipe Factory relocated. Although at the beginning of 2000 there have been some industrial reuse project started to appear (such as Shuang'an shopping malls renovated by Beijing Watch Factory and artist studios set up in Beijing 798 since 2002), these examples only played the role of sporadic architectural experimentations of industrial space reuse, they did not have been recognized as proper heritage.

In 2006, the State Administration of Cultural Heritage held the *Wuxi Forum* and the "Wuxi Proposal" was regarded as the beginning of the protection of industrial heritage at the national level in China.

In the mid-1980's after China's reform and opening up, industrial enterprises relocated from the central area of the city. In the 1990's, with the rapid economic development and urbanization, the contradictions between industry and urban social life (such as in the field related to transportation, energy and environment) became more and more prominent and furtherly promoted the relocation of industrial enterprises. In 1993, the Beijing Municipal Government issued a policy for the relocation of industrial enterprises, focused on solving industrial production pollution and disturbing residents. Beijing CBD was built in the former Eastern Suburbs Industrial Zone after the relocation of industrial enterprises (including the No. 1 Machine Tool Factory, No. 2 Printing and Dyeing Factory, Snowflake Refrigerator Factory, Beijing Jeep Depot and other famous

enterprises). After 2000, due to the rapid development of real estate and the continuous expansion of the city, the industrial enterprises originally located in central areas of the city, were forced to move to smaller and peripherical cities, (such as Tangshan, Hebei, which is farther away). Due to the lack of awareness of the industrial heritage's values at that time, the real estate development adopted the method of "pushing back", wich had as results massive demolitions of many industrial heritage sites. Therefore, the *Wuxi Proposal* ratified by the Wuxi Forum in 2006 had such a great impact and reversed people's understanding of industrial facilities. In the third census of cultural relics and the selection of the seventh batch of national key cultural relics protection units, the protection of industrial heritage has been strengthened.

The contradiction between industrial structure adjustment and urban construction not only occurs in big cities such as Beijing and Shanghai, but also in many smaller industrial cities. In 2013, the National Development and Reform Commission's "National Old Industrial Base Adjustment and Reconstruction Plan (2013-2022)" was approved by the State Council.

Interviewer: Which was the role of the academic and scientific institutions in developing the debate on Industrial heritage practice in China? Which are the scientific institutions which mainly gave a contribution? Which is the role of the scientific institutions in the contemporary industrial heritage practice in China?

Liu Boying: In 2010, the Architectural Society of China established the Industrial Heritage Academic Committee, which is the first academic organization on industrial heritage in China. In 2013, the Industrial Heritage Department of the Chinese Historical and Cultural Cities Committee was established. In 2014, the Industrial Heritage Committee of the Chinese Cultural Relics Society was established. The annual academic conference has been held for 11 sessions so far, and a collection of papers has been published in each session. We have formulated the "China Industrial Heritage Survey Index" and "China's Industrial Heritage Value Evaluation Guidelines", and counted the list of industrial heritage in the national key cultural relics protection units. Interdisciplinary research teams in the fields of urban planning, architecture, technology history, environmental protection, museums, have been established and government

management departments, industrial enterprise leaders, and cultural and creative park operating agencies have also participated. It has established an academic system and academic norms for the investigation, research, protection and utilization of China's industrial heritage, undertook the tasks of government management departments, participated in the formulation of relevant policies and promoted the knowledge of industrial heritage. A large number of scholars have participated and a large number of doctors and masters have also been trained. Planners and architects in academic organizations are directly involved in the protection and utilization of industrial heritage both in practical and in the formulation of theoretical frameworks and policies.

Interviewer: Which was the role of the government in developing the debate on Industrial heritage practice in China? How the academic and scientific institutions interact with the government?

Liu Boying: The government mainly guides the protection and utilization of industrial heritage by promulgating documents. Experts and scholars from academic and scientific institutions provide advice to the government, participate in document discussions and list selection.

Interviewer: Is it possible to state that the academic and scientific institutions, through a bottom up actions, brought to the public and to the government attention the issue of the industrial heritage? And is that correct to say that, on the other hand, in the latest years the government built up a national practice through a top down strategy? Do you think that scientific and academic communities influenced the action of the government in establishing a national standardized practice on industrial heritage?

Liu Boying: Representatives of China's "People's Congress" and "CPPCC" have put forward proposals for the protection and utilization of industrial heritage many times, including Shougang and Beijing Coking Plant. This is the voice of the people from the bottom up. It is very important to establish a standardized industrial heritage protection management system at the national level. The main role of academic and scientific groups

is to advise the government, to influence and to participate in the formulation of government policies and to promote the importance of the values of industrial heritage.

Interviewer: Given the multigovernmental layers system, along with the Ministry of Industry and Information Technology, which are the other governmental agencies which are taking part to the process to protect and reuse industrial heritage in China?

Liu Boying: The Natural Resources Department announced 88 national mine parks in four batches. The State-owned Assets Supervision and Administration Commission has released 11 central enterprise industrial cultural heritage lists (nuclear industry), 20 (steel industry) lists, 20 (information and communication industry) lists, 15 (petroleum and petrochemical industries), and 15 (machinery manufacturing industries). The National Tourism Administration issued the "National Industrial Tourism Development Outline" to promote the reuse of industrial site, spread industrial culture and implement the "Ten Hundred Thousand" project to further develop industrial tourism (which means the identification of 10 industrial tourism cities, 100 industrial tourism bases, and 1,000 national industrial tourism demonstration sites). At the end of 2017, 10 national industrial heritage tourism bases were released. The State Administration of Cultural Heritage "Notice on Strengthening the Protection of Industrial Heritage" Cultural Heritage Baofa [2006] No. 10, promulgated the "Guidelines for the Protection and Utilization of Industrial Heritage (Draft for Comment)", and compiled the "Specifications for the Protection and Utilization of Cultural Heritage" Industrial Heritage (WW\T0091 -2018) / Industry Standard for Cultural Relics Protection of the People's Republic of China.

Interviewer: Given the lists yearly issued by the Ministry of Industry and Information Technology on industrial sites to be protected at national level and given the lists issued by the China Association for Science and Technology along with the Urban Planning Society of China, in which relation stay the lists issued by the government and the ones issued by the scientific organizations? Do the lists published by the Association for Science and Technology and the Urban Planning

Society of China have any official relevance or consequence at protection level? Do they have any practical consequences?

Liu Boying: The "National Industrial Heritage List" of the Ministry of Industry and Information Technology is an official list. It is based on the voluntary application of enterprises which are lately verified and selected by experts and announced by the Ministry of Industry and Information Technology. However, the declaration is very accidental so that it happens that some enterprises and local management departments are very active and committed, while some are not, so the statistics presented by the national industrial heritage lists, including the geographical distribution and the time distribution, do not necessarily mirror the actual situation. We just held a meeting last week to discuss that the interim measures should be changed to measures. No reviews this year, and reevaluation next year.

The "China Industrial Heritage Protection List" of the Association for Science and Technology is nominated by experts, identified by experts from industry scientific institutions (industry associations) and then confirmed by experts from the Association for Science and Technology and the Planning Society; so it is a very scientific selection structure.

Interviewer: Do you think that the national standardized Industrial heritage protection and management system adopted by the Ministry of Industry and Information Technology is an efficient system?

Liu Boying: The Ministry of Industry and Information Technology's "National Industrial Heritage" is based on the "Guiding Opinions on Promoting the Development of Industrial Culture" released in 2016. There is no special fund to support it and there are no penalties for management measures. On the contrary, the State Administration of Cultural Heritage's "National Key Cultural Relics Protection Units" according to the "Relics Protection Law", established that to destroy cultural relics is illegal and followed by different penalties. The entire Cultural Heritage system is supported by special national funds. Comparing the two systems, the strength of the cultural heritage protection practice is evident. But management is always better than no management, and the sites listed on

the national industrial heritage list will certainly not be easily demolished. How to make the protection system more effective is an individual system project, which needs to be constantly explored and improved.

Interviewer: How do you see the industrial heritage in China in the next future?

Liu Boying: China's industrial heritage lies first in discovery, discovery of its existence, and discovery of its value. As a heritage site, the value is far more important than the utilization of its space. However, due to the huge industrial heritage plants, not using them will also cause a waste. It is very important to emphasize the scientific nature of protection and the innovation of utilization. Protection is the foundation, value needs to be interpreted and utilization is the icing on the cake.

APPENDIX V

Progressive number	List	Number on the list	Site Name	Province	Foundation date	Historical classification	Industrial typology	State-owned/ local state-owned	Key Cultural Relic	Park/ museum
1	1	1	Changyu Wine Company	Shandong	1892	2	Distillery	yes		
2	1	2	Anshan Iron and Steel Group	Liaoning	1915	3	Steel	yes	yes	yes
8	1	3	Factory)	Liaoning	1885-90	2	Dock and shipyard	yes		
4	1	4	Singuezation State-Dwiled Offiverse Forcerain Factory	Jiangxi	1954	4	Porcelain	yes		yes
S	1	5	Xihuashan Tungsten Mine	Jiangxi	1908	2	Mine	yes		
9	-	9	The Benxi Lake Coal and Iron Company	Liaoning	1905	2	Coal mine + iron	yes	yes	yes
7	1	7	Baoji Shenxin Yam Factory	Shanxi	1939	3	Textile	yes	yes	yes (III costruct.)
∞	1	∞	Wenzhou Alum Mine	Zhejiang	1949	4	Mine	yes		yes
6	1	6	Linghu Silk Factory	Zhejiang	1946	3	Silk	Yes		yes (III costruct.)
10	1	10	Chongqing Iron and Steel Plant	g	1938	3	Steel	yes		yes yes (in
11	1	11	Han Yeping Company	Hubei	1908	2	Steel	ż		costruct.)
12	2	1	State-owned 738 Factory	Beijing	1957	4	Electronic engineering	Yes		yes
13	7	2	State-owned 751 Factory	Beijing	1954	4	Power plant	Yes		yes
14	7	3	Beijing satellite manufacturing plant	Beijing	1958	4	engineering	Yes		
15	2	4	Nuclear energy plant "One pile, one device"	Beijing	1958	4	power plant	Yes	yes	
16	2	5	Jingxing Coal Mine	Hebei	1898	2	Coal mine	7		
17	2	9	Qinhuangdao West Port	Hebei	1898	2	Coal port	yes		yes
18	7	7	Namuan Prinning Durcau Ciminaniguao I Ower Plant	Hebei	1928	3	Power plant	yes	yes	yes
19	7	∞	Shanhaiguan Bridge Factory	Hebei	1894	2	Heavy industry	٠		
20	2	6	Kailuan Coal Mine	Hebei	1878	2	Coal mine	yes		yes
21	7	10	Qixin Cement	Hebei	1889	2	Cement Military industrial	ż		yes
22	7	111	Taiyuan Arsenal	Shanxi	1898	2	enterprises	yes		yes
23	2	12	Yangquan No. 3 Mine	Shanxi	1907	2	Coal mine	yes		yes (in costr.)
24	2	13	Shenyang Foundry	Liaoning	1939	3	Heavy Industry	yes		yes
25	7	14	Qingyang Chemical plant	Liaoning Heilongija	1937	3	Chemical plant	Yes		
26	2	15	Tieren one well site/ Iron Man Well Site	ng	1960	4	Oil company Military industrial	Yes	yes	yes
27	2	16	Jinling Machinery Manufacturing Bureau	Jiangsu	1866	2	enterprise	Yes		yes

yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	yes	yes	yes	ن	ن	yes	٤	٤	ċ	ż	2	yes	yes	٤	yes
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yes	Yes	Yes	Yes	yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	yes	yes	yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	¢•	yes	Yes
Chemical plant	Flour mill	Textile	Steel	Paper	Distillery	Machinery	Beer	Textile	Machinery	Machinery	Mine	Tea	Household appliance	Distillery Military industrial	enterprise	Distillery	Distillery	engineering	Power plant	Steel	Coal mine	Oil company	enterprise	Power plant	Mine	Cloisonne	National Mint	Oil company
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Jiangsu	Jiangsu	Jiangsu	Anhui	Anhui	Jiangxi	Shandong	Qingdao	Qingdao	Henan	Henan	Hubei	Hunan	Sichuan	Sichuan	Sichuan	Sichuan	Guizhou	Guizhou	Yunnan	Yunnan	Shaanxi	Shaanxi	Gansu	Gansu	Xinjiang	Beijing	Beijing	Tianjin
Yongli Chemical Industry	Maoxin Flour Mill	Dasheng Yarn Factory	Hefei Iron and Steel Plant	Jingxian Mingxing Rice Paper Factory	Lidu Liquor Factory	Jinan Second Machine Tool Factory	Tsingtao Brewery	Qingdao National Cotton No. 5 Factory	First tractor manufactory	Luoyang Mining Machinery Factory	Tonglushan Ancient Copper Mine Site	Anhua Tea Factory	Chengdu Hongguang Electron Tube Factory	Luzhou Laojiao winery site	Chinese Academy of Engineering Physics.	Wuliangye cellars and wine-making workshops	Moutai Distillery Workshop	Liyang Aero Engine Company	Shilongba Hydropower Station	Kunming Iron and Steel Holding	Wangshiwa Coal Mine	Yanchang Oil company	China National Nuclear Corporation 404	Liujiaxia Hydropower Station	Keketuohai Mining Bureau	Beijing Enamel Factory	Printing Bureau	Dagang Oilfield Well
17	18	19	20	21	22	23	24	25	56	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	1	5	3
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Guandong Chongqin g Chongqin	Sichuan	Sichuan	Sichuan	Sichuan Guizhou	Guizhou	Y unnan Tibet	Shaanxi	Shaanxi	Gansu	Beijing Tianjin	Tianjin	Hebei	Hebei Shanxi	Liaoning	Liaoning	Liaoning	Jilin
Nanfeng Ancient Stove Underground Nuclear Plant Chonocing Changfens Chemical Plant	Shujjing Street Winery Zigong Well Salt site	Panzhihua Iron and Steel Plant Dongwo Hydropower Station Longchang Gas Mine Shengdengshan Gas	Field Site Former controlled nuclear fusion experiment site	Jiayang Coal Mine Liuzhi Mining Area	Guizhou mercury mine	rengqing 1ea Old ractory Yangbajing Geothermal plant	Hongguanggou Aerospace Sixth Academy Pucheng National Time Service Center	Dingbian Saltworks	China 504 Nuclear Plant	Beijing Telegraph Building Seagull Watch Industry	Tianjin Third Cotton Textile Factory	Zhangjiakou Shacheng Winery	Ruins of Liu Lingzui's Burning Pot Fenjiu old workshop and traditional winery area	Laolongkou Winery	Dalian Shipyard	Fuxin coal industrial heritage group	Changchun Film Studio
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yes yes yes Yes	Yes yes	yes yes yes	yes yes	yes Yes yes	yes yes yes	yes yes	yes ? Yes
Gold mine Cigarettes Metal alloy Eletric machinery Power plant Steel	Telecomunication aerospace engineering Textile	Distillery Chinese pen Mine	Distillery aerospace engineering food	dock and shipyard Tea aerospace engineering Chemical plant	Mine Porcelain Railway	Telecomunication Distillery	Oil company Distillery Machinery refractory products
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Jiapigou Gold Mine Harbin Cigarette Factory Northeast Light Alloy Processing Plant Harbin Electric-motor Factory Harbin Boiler Factory Beiman Special Steel company	Great Northern Telegraph Bureau Yun-10 aircraft Chanezhou Daming Yarn Factory	Changzhou Dahlning Tarn Factory Shuanggou Old Pits and Winery Workshops Shanlian Lake Pen Factory Lujiang Alum Mine	Kouzi old pits and winery workshops China Aerospace 603 Base Hu Yumei sauce and pickle shop	Fujian Shipping Administration building Anxi Tea Factory Hongdu Machinery Factory Jiangxi Xinghuo Chemical Plant	Ruins of the Tongling Copper Mine Jingdezhen State-owned Jianguo Porcelain Factory Jinan Railway Bureau Jinan Machine Factory	Jinan Post Office Guojing Paojing Cellar Group and wine workshop	The meritorious well of Shengli oilfield Shandong Jingzhi Wine Industry Dezhou Machine Tool Factory Luoyang Refractory Material Factory
11 12 13 15 16 16 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	17 18	20 21 22	23	26 27 29 29	30 31 32	33	35 36 37 38
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Copper	Power plant	Textile	Tea	Railway	Mine	Mine	Military industrial enterprise	Power plant	pooj	aerospace engineering	Chemical plant	Telecomunication	Eletric machinery	aerospace engineering	enterprise	Mine	Power plant	Power plant	Porcelain	Oil company	Mine	Oil company	aerospace engineering
4	4	4	4	3	2	3	3	4	2	4	3	4	4	4	3	4	4	4	1+4	3	4	3	4
1958	1974	1969	1951	1936	1902	1914	1940	1954	1860	1965	1937	1965	1964	1960	1936	1958	1955	1955	Archeology- 1970	1939	1950	1936	1958
Henan	Hubei	Hubei	Hubei	Hunan	Hunan	Hunan	Chongqin g	Cnongqin g	Sichuan	Sichuan	Sichuan	Sichuan	Guizhou	Guizhou	Yunnan	Tibet	Tibet	Tibet	Shaanxi	Gansu	Qinghai	Xinjiang	Beijing
Luoyang Copper Processing Plant	Gezhouba Water Conservancy Project	2348 Pu Textile Factory	Zhaoliqiao Tea Factory	Engine Factory of Guangdong-Han Railway	Xinhuang Mercury Mine	Tin and Antimony mines	Site of the First Factory of the Ordnance Department	Shizitan Hydropower Station	Soy Sauce Brewing Workshop	China Gas Turbine Research Institute	Site of Yonglichuan Factory	Sichuan International Radio Site	Changzheng Electric No. 12 Factory	Guifei Strength test center site	State-owned 298 Factory	Yimen Copper Mine	Nagin power plant	Duodi Hydropower Station	Yaozhou Ceramic Industry Heritage Group	Yumen Oil Field	Old Area of Mangya Asbestos Mine	Dushanzi Oil Refinery	Beijing sateinte manufacturing plant _ Batch n. 2
39	40	41	42	43	4	45	46	47	48	49	50	51	52	53	54	55	99	57	28	59	09	61	62
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164

APPENDIX VI

Interview to Li Youran, a sport operation manager of the Shougang Sport management company, member of the BOCOG and responsible of the Big Air venue in Shougang Industrial Park, during the 2022 Beijing Winter Olympic Games. The author interviewed Li Youran in Beijin in February 2022.

Interviewer: Since your father was an employee of the company, which is your first memory of Shougang Steel Factory? Can you tell something about early memories when the steel factory was still in function? Was you family living close or into the factory's facilities?

Li Youran: My first memory of Shougang is about big chimneys and cooling pools (Quming Lake and Xiu Lake) and the ducks on the lakes. To me Shougang is not only a steel factory. It's kind of village. It produced a lot of goods. What I remember is the Shougang bread and the Shougang sparkling water. It's not an exaggeration to say that, still today, a lot of people remember these two products. There were some department stores with many products, our first vacuum cleaner come from there. The company has tried its best to improve workers family's life. Shougang Group was providing and producing everything from the food, to the clothes - yes, it had its own garment manufactory. I remember there were big stores, our first vacuum cleaner, for example, came from there. The factory's staff was very numerous and everybody who was working in Shougang was living around the industrial site and was joining the facilities.

My family was living close the factory's facilities like the majority of the workers. There were many residential neighborhoods around the factory, for instance the Third Jindingjie residential quarter, the Fourth Jindingjie residential quarter and so on; nobody lived inside the factory at that time.

Interviewer: What happened when the production stopped and relocated? Which was the working position of your family members and what happened after relocation? Were you and your family re-integrated to work in the new Shougang Industrial Park? Could you please tell us something about the transition period between steel factory and Industrial park?

Li Youran: When I was about 9 years old (in 2001), China get the right to hold the 2008 Olympic Games, I think it was then when Shougang started to think and to plan to stop the production and to relocate. To be honest, when the production stopped and relocated it did affect my dad. My dad, at the time, was a manager, and he had to deal with the big problem of re-organize the job positions of all the workers he was responsible for; the problem was that the majority of the workers came from small villages, not far from Beijing or from the suburbs of the capital, so they didn't want to be relocated too much far away. His duty was to make sure that everyone could have a decent life in respect of their wills. He has tried his best to figure out how to relocate their positions, I think he had sent plenty of workers to different training sessions. He spent a lot of time on that, sometimes he ignored me

Interviewer: Being a representative of BOCOG, when did you start to work for BOCOG and to Shougang Olympic venue? What has been your role before and during the Olympic competition? Working at the Big Air venue, which was internationally considered the most iconic venue of these Games, how did you feel to cover such a big responsibility, being personally involved for these Olympic Games? Which will be your role after the Olympic games?

Li Youran: I was graduated on 2017, at the same year I come into Shougang. In January 2019, I was chosen by Shougang, they sent me to BOCOG. My position is sport coordinator, I was assigned to Big Air venue; according to the job description my responsibility was to coordinate the competition works during the preparation of the venue and during the competition itself; I was responsible to contact stakeholders of the venue, to coordinate the preparation of the venue and the equipment procurement and emplacement. To me it was both an honor and a big responsibility, I have two identities:

manager of the venue staff and staff member of BOCOG, I need to switch between two identities at the right time, it was part of my job and I guess I managed it quite well. After the Games, I will come back to Shougang Park and I will be responsible for the sport operation department

After the game, I'll come back to Shougang, doing the sport operation things.

Interviewer: What do you think about the way in which Shougang Steel Factory has been transformed into an industrial park? Do you think that the park is serving the community? Is the community feeling involved? In your opinion, Shougang Industrial Park is visited by the workers which used to work in the factory? Has your father and his colleagues visited the park after the renovation? What do you and your family think? Is it an add value to the Beijing society?

Li Youran: I've met several old workers here in the park. They used to work in the factory before and now they come here very often to have a walk or to enjoy the new industrial spaces remembering all the days they had spent here working and living their life with their families. They know this factory more than us. They would like to introduce this factory to every visitor who doesn't know the place, they like to explain the site to the visitors. My family thinks that this is a nice place which has been part of our life and which will be still part of our days. The industrial park definitely improved and will continue to improve the level of services in this area of the city: there will be a shopping mall, an extreme sports park, in the future there will be a cinema, an exhibition hall and so many other facilities. It is an add value to Beijing society, to the community. There are very few interesting places in the west part of Beijing and Shougang Park will be the hotspot for the memory of the workers and for the future generations.

Interviewer: What do you think is the most interesting characteristic of the Park? Which is the value added by the Big Air Platform?

Li Youran: To me, every corner of the park is interesting.

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声明

本人郑重声明:所呈交的学位论文,是本人在导师指导下,独立进行研究工作所取得的成果。尽我所知,除文中已经注明引用的内容外,本学位论文的研究成果不包含任何他人享有著作权的内容。对本论文所涉及的研究工作做出贡献的其他个人和集体,均已在文中以明确方式标明。

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RESUME

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EDUCATION

01.11.2018 | present

Joint PhD Program: Politecnico di Torino + Tsinghua University of Beijing:

"Transnational architectural models in a globalized world"

Discipline: History of Architecture

Thesis: "Protection and management of Industrial Heritage in China. History, Practice

and Values"

Focus on: patrimonialisation process in China; Legal and administrative cultural heritage

system in China; industrial heritage and urban regeneration.

11-2011 | 05.03.2015

Master in Art History and Conservation of Cultural Heritage,

Discipline: History of Art and Architecture, heritage studies, Conservation of

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ACADEMIC TEACHING ASSISTANT

1.10.2019 | 31.01.2020

Teaching Assistant Politecnico di Torino

History of Architecture. The city and its heritage

(Focus on: The World Heritage City; Historic Urban Landscapes)

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Teaching assistant Politecnico di Torino

History of Architecture

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INTERNATIONAL RESEARCH PROJECT

PhD associated member to "Uses of Cultural Heritage at the Beijing Winter Olympic Games of 2022"

Promoted by: École polytechnique Fédérale de Lausanne (CH). The project questions the role of cultural heritage in the transformations related to Beijing 2022, within the urban perimeter of the historical districts of the Beijing core area and in the industrial district of Shougang which hosts the headquarters of the Chinese Olympic Committee.

See website of the international research project:

https://heritage-beijing-2022.epfl.ch/about/

WORK EXPERIENCE

March 2014 | July 2021 (ITALY) ARCART SRL., ITALY

On-site and on-line consultant for ARCART Srl, Italian **restoration company**. Research and development of restoration project of architectonical heritage (churches, villas, palaces).

April .2016 | July .2018 (CHINA)

ITALIAN EMBASSY, ITALIAN EMBASSY SCHOOL, BEIJING, CHINA School Educational Coordinator

Development of school programs and planning of teaching activities; management of the team and of the resources; relations with Italian and foreign diplomatic institutions in Beijing, organization of cultural events in collaboration with Italian and foreign cultural institutions in Beijing.

The School curriculum is inspired by the Italian Constitution, the EU Charter of Fundamental Rights, the UN Convention on the Rights of the Children. By sustainability the School mainly refers to the UN Sustainable Development Goals (No.4 Quality Education) and is always developing projects about environmental education, food education, and inclusion.

2008 | 2015

ARDEA, ART EDUCATION COMPANY (ITALY)

Educational project development in Veneto Region **UNESCO** sites.

Focus on: History of Architecture, Andrea Palladio, World heritage sites; UNESCO values:

PUBLISHING AND CORRESPONDANT ACTIVITY

09.2015 | present

ARTRIBUNE and **ARTE.it**, Italian art magazines and online platforms **Foreign correspondent** for Artribune Magazine;

See all the articles published by the author for Artribune Magazine https://www.artribune.com/author/giorgiacestaro/

CURATING ACTIVITY

The author is **curator** (along with Prof Michele Bonino, Alberto Bologna and Prof. Pierre Alain Croset) of "**Memory and Regeneration**" a column in **World Architecture - SHIJIE JIANZHU** magazine. The column Memory and Regeneration aims to present and discuss exemplary projects of urban regeneration and transformation of architectures, establishing a critical debate between China and the West on topics related to the meanings of the redevelopment of existing built environment.

See the website with all the published issues: http://chinaroom.polito.it/publications/world-architecture/

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2019

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2022

Participation confirmed as speaker with Helena Roux to the "Big Stuff 2022" Conference for the conservation and safeguarding on industrial and technological heritage, in Seixal, Portugal, July 2022. Title of the accepted paper: "Shougang: broadcasting industrial heritage at the 2022 Winter Olympic Games".

Participation confirmed as speaker with Helena Roux to the "AIPAI 2022" conference of the Associazione Italiana per il patrimonio archeologico industriale (Italian association for industrial heritage" in Rome, June 2022. Title of the accepted paper: "Hosting the Olympics through industrial regeneration and reuse: a comparative case study of Torino 2006, London 2012, and Beijing 2022".

RESUME

2019

Participation as speaker to the "AISU 2019" conference of the Associazione Italiana di Storia Urbana (Italian Association of urban history) in Bologna, September 2019. Title of the published paper: "Storia della città orientale. Rileggere le geografie della ricerca sulla città cinese".

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