Walls and Gates, Windows and Mirrors:
Urban Defences, Cultural Memory, and Security
Theatre in Song Kaifeng

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Abstract: Kaifeng, the capital of the Northern Song (960–1127) dynasty, boasted sophisticated siege defence installations, which were ultimately breached by the Jurchen invasion of 1126–1127. According to both the archaeological and textual evidence, its concentric city walls and militarized gates with barbicans and bastions represented a crucial stage in the
militarization of urban form in early-modern China, as well as a more open approach to planning. While Kaifeng’s urban defences evoked imperial majesty and personal security for Northern Song residents who described them, diasporic literati of the Southern Song (1127-1279) invoked the violation of this defensive perimeter as a metonym for the invasion of their lost homeland. The concept of security theatre explains how Northern Song Kaifeng’s city walls and gates could simultaneously function as efficacious siege defence installations and be perceived as symbolic defences.

Introduction

Textual representations of early-modern Chinese cities are not transparent windows that reveal long-vanished places; rather, they are distorting rear-view mirrors that reflect their authors’ own subjective perceptions and dispositions. Scholarly interpretations of the Northern Song capital of Kaifeng 開封 have long been based on a naïve positivist reading of a limited corpus of extant primary sources. To cite the most flagrant example, Meng Yuanlao’s 孟元老 (fl. 1126-1147) Dongjing menghua lu 東京夢華錄 has been read as a photo-realistic description of the city as it actually appeared during the late Northern Song, a series of pictures recorded by passive human cameras and then rendered precisely into words that corresponded to objective visual and historical realities. These assumptions of transparency must be problematized, because scholars reflexively tend to equate the most current technology of representation with earlier representational technologies, whose users operated according to different sets of instructions and assumptions. Furthermore, we need to approach these primary sources more critically and rigorously, by paying closer attention to the cultural and historical contexts of their composition. Textual descriptions of Kaifeng were not objective records of physical spaces and social practices; they were subjective representations that reflected both individual and collective memory as they interacted. Rather than striving for such modern

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1 My analysis of collective memory of Song-dynasty Kaifeng—and its tenuous connection to textual representations of the city’s history—is informed by that of Pierre Nora: “Memory and history, far from being synonymous, appear now to be in fundamental opposition. Memory is life, borne by living societies founded in its name. It remains in permanent evolution, open to the dialectic of remembering and forgetting, unconscious of its successive deformations, vulnerable to manipulation and appropriation, susceptible to being long dormant and periodically revived. History, on the other hand, is the reconstruction, always problematic and incomplete, of what is no longer. Memory is a perpetually actual phenomenon, a
ideals as verisimilitude or accuracy, Song-era writings about cities engaged urban spaces and places normatively and even impressionistically, depicting how readers should experience and commemorate them.

For Southern Song literati living in exile after the city fell to Jurchen invaders in 1127, textual descriptions of Kaifeng’s sites of memory were suffused with nostalgia for a vanishing past and lost territory. Their nostalgia was, quite literally, the pain (ἀλγος) induced by their physical inability to return home (νόστος), so their written memories of inaccessible places and spaces were tinted with emotional and intellectual subjectivities. While historians have thickened their descriptions of Northern Song Kaifeng as far as the documentary record will allow, these texts will yield new light when we examine them as mental maps of their authors’ perceptions that demonstrate more subtle cultural phenomena: how Northern Song literati perceived urban spaces, what they signified to them at the time, and how they wanted their contemporaries to experience them; and, furthermore, how Southern Song literati perceived urban spaces, what these spaces signified to them in retrospect, and how they intended their present and future readership to commemorate these spaces. Although Chinese architecture and urbanism were not explicitly designed for physical permanence, individual and collective memory imbued them with social and cultural meaning, so that urbanites and refugees in and from Kaifeng carried with them a shared sense of the past that overlaid, augmented, and overrode their visual perceptions and remembered experiences of the city.

Southern Song literary descriptions of Kaifeng were all coloured by a shared traumatic experience: the city’s physical destruction and geographical inaccessibility was central to its reproduction in cultural memory. Twice besieged and finally overrun by Jurchen invaders in 1126-1127,
Kaifeng’s fall was a traumatic and catalyzing event for members of the Southern Song sociocultural elite, producing a wave of nostalgic glorification among a displaced generation and their descendants in the south. After the defeated and depopulated city was sacked and emptied, the last two Northern Song monarchs, Huizong 徽宗 (r. 1100-1126) and his son Qinzong 欽宗 (r. 1126-1127), were taken north along with a train of looted imperial treasures, and both dethroned rulers ultimately died in captivity deep inside the Jurchen homeland. Kaifeng and all of the territory north of the Huai River 淮河 were incorporated into the Jurchen Jin 金 empire, whose hegemony the Southern Song court acknowledged by accepting a position of tributary inferiority in the Treaty of Shaoxing (Shaoxing heyi 紹興和議) of 1142. Aside from a small number of diplomats, few Southern Song literati were able to return to Kaifeng after it fell, but many more virtually revisited the city as it existed in their individual memories—and for later generations who had no direct experience of its lost sites—in the collective memory.

Central to this collective experience of nostalgia was the status of Kaifeng as a symbol of the Northern Song court’s cultural dominance and political hegemony. This article is one facet of a larger research project, which will demonstrate how Kaifeng’s urban spaces became a social construction of the pre-conquest past, shaped by the concerns of the post-conquest present. I will scrutinize one facet of this phenomenon, by analyzing a sample of written memorabilia literature about what physically enclosed and subdivided that urban space: the city walls of Kaifeng, explaining how these written texts reinforce and contradict one another, as well as the archaeological record. While Northern Song literati celebrated the sense of imperial majesty and personal security the walls evoked, displaced Southern Song literati saw the violation of this defensive perimeter as a metonym for the invasion of their lost homeland.

5 For a detailed geographical study of the Hebei and Shanxi invasion routes used by the Khitan and Jurchen invasion forces, and the limited utility of the Northern Song’s strategy of concentrating a massive standing army at Kaifeng, see Wang Mingsun (2008b), pp. 292-295. See also Levine (2009), pp. 634-643. For a study of the literary narratives of Huizong’s death in captivity, see West (2006).

6 For two descriptive studies of Kaifeng under Jurchen rule, see Wang Zengyu (1998) and Liu Chunying (2006b). For a recent study of Lou Yue 樓鑰 (1137-1213) and Fan Chengda’s 范成大 (1126-1193) accounts of their embassies to the Jin court, which included visits to Kaifeng, see Walton (2002) and Zhang Jing (2004). For an analysis of all four surviving embassy accounts of Jin-dynasty Kaifeng as examples of the persistence and corruption of cultural memory, see Levine (2013).
Material Realities: Kaifeng’s Walls, Defensive Architecture, and Urban Form

Kaifeng’s city walls were not exclusively social constructions from the past, since the physical remnants of their tamped earth, bricks, and mortar can be observed and reconstructed in the present. Before analyzing Song literati perceptions of Kaifeng’s walls, I will mine the historical and archaeological record to reassemble everything known about their construction, alteration, destruction, and remains. These textual and material sources will allow us to explore the intersection of defence technology, urban planning, imperial spectacle, and public works. From the late Five Dynasties into the late Northern Song dynasty, the imperial court made wall maintenance, reconstruction, and expansion a high priority, employing large numbers of troops and corvée labourers to improve the capital’s defensive capabilities. At the same time, I will incorporate and evaluate relevant fragments of memorabilia literature about these walls and read them against the historical and archaeological record, in order to disentangle the connections between history and memory.

When emperor Taizu 太祖 (r. 960-976) decided to site his new dynasty’s capital at Kaifeng, he and his courtiers were choosing the least worst option available. He and his successor Taizong 太宗 (r. 976-997) were publicly ambivalent about this choice, and seriously considered moving their capital westward to Luoyang 洛陽, before finally heeding their ministers’ moral and fiscal counter-arguments. Their decision was expedient and pragmatic, since Kaifeng had become the nascent empire’s logistical, military, and administrative centre by the mid-tenth century. Known during the Sui and Tang as the prefectural seat of Bianzhou 汴州, Kaifeng had already served as the capital of four out of the Five Dynasties, with the exception of the Later Tang 後唐 (923-937). Logistical and practical considerations dictated this choice, since Kaifeng had suffered substantially less wartime damage.

7 For a transcript of Taizu’s dialogue with his advisors about moving the capital to Luoyang, and their advice to keep it at Kaifeng, despite its shortcomings, see Xu zizhi tongjian changbian, chap. 17, p. 396.

8 When Zhu Wen 朱溫 (852-912) overthrew the Tang to establish the Later Liang 後梁 dynasty (907-923), he officially renamed Bianzhou as Kaifeng 開封府 and the Eastern Capital (Dongdu 東都). See Jiu Wudai shi, chap. 3, p. 48. For a detailed explanation of Kaifeng’s administrative geography from the Spring and Autumn period through the Five Dynasties, see Zhou Baozhu (1992), pp. 2-8. For the standard explanation of North China’s political centre shifting eastward, see Mote (1999), pp. 17-20.
than either Chang'an or Luoyang. More importantly, Kaifeng's eastern orientation and its nodal position in the empire's water transport network, especially its direct connection to Jiangnan, made it a viable imperial capital. Southern-grown grain shipped north via the Grand Canal, which fed into the Bian River and several other canalized rivers that flowed through the city, could support a large population of civilians and military defenders. Located on the western edge of the Yellow River's alluvial plains, Kaifeng was surrounded by a more agriculturally productive hinterland than either Luoyang or Chang'an had been. Yet, Kaifeng lacked these earlier capital cities' natural defences and, while the Yellow River to the north of the city could temporarily forestall a cavalry charge, it was also prone to flooding.

With such liabilities, how could civil and military authorities solve the problem of defending a city like Kaifeng? The most detailed Northern Song military encyclopedia, Zeng Gongliang's Wujing zongyao qianji of 1044, offered abstract remedies for a city's geographical indefensibility: 

兵法曰：‘守城之道，無恃其不來，恃吾有以待之；無恃其不攻，恃吾有所不可攻…’ [Sunzi's] Art of War relates: 'The way to defend a city does not rely upon [the enemy] not coming, but relies upon our own preparedness [to receive] them; it does not rely upon [the enemy] not attacking, but relies upon what we have done to make [ourselves] unassailable.'

故善守者，敵不知所攻，非獨為城高池深，卒強糧足而已，必在乎智慮周密，計謀百變。Hence, with a good defence, the enemy will not know where to attack. This is not simply [because of] high walls and deep moats, or strong troops and sufficient provisions, but it certainly lies in tactical knowledge and forethought, and a hundred [possible] permutations of calculations and strategies.

While well-maintained and properly-designed walls and moats could not guarantee a successful siege defence, siting a city for maximum geogra-

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9 For explanations of why the Song founders chose to site their capital at Kaifeng rather than Luoyang, see Kracke (1975), pp. 51-54; Ma Qiang (1988); Zhou Baozhu (1992), chap. 1; Wang Mingsun; Zhou Baozhu (1992), chap. 1; and Wang Mingsun (2008b), pp. 273-303.

10 This quotation is adapted from Sunzi 孫子, The Art of War (Bingfa 兵法), Chapter Eight 篇第八, “Nine Transformations” (Jiubian 九變).

11 Wujing zongyao qianji, chap. 12, p. 1a.
A physical and strategic advantage required its leadership to work with the topography, rather than against it:

加之得在山之下，廣川之上，高不近旱而水用足，下不近水而溝防省。因天財，就地利，土堅水流，險阻可依，兼此刑勢，守則有余。故兵法曰：‘城有不可攻。’

In addition, [a walled city should be located] below a great mountain or above a broad river. It should be high up but not too dry, and [river] water should be sufficient to use; it should be low but not too close to the water, and jetties and ditches can be fewer. Because of the resources Heaven has granted, it should take advantage of topography: earthworks should be firm and water should be inflowing, and strategic points reliable. If one combines the advantages of these circumstances, then defences should be more than necessary. Therefore, the Art of War relates: ‘Of walled cities, there are those that cannot be attacked.’

While Zeng did not specifically name Kaifeng (or any other city) in his theory of siege defence, it would probably have been clear to him and his contemporaries that its geographical setting was a major strategic liability. So the Song court relied upon artificial barriers and concentrated armies, along with well-maintained defensive barriers, in order to defend the capital from foreign invasions and internal rebellions. As in medieval Western Europe, urban defenders in Tang-Song China learned how to deflect cavalry advances with fortifications, and devised countermeasures against escalating technological advances in siegecraft, such as bombardment and mining which could, given weeks and months, ultimately break through hardened city walls and gates.

Northern Song Kaifeng was encircled by three concentric rectangular walls: an Outer City Wall (waicheng 外城), an Inner City Wall (neicheng 内城), and a Palace City Wall (gongcheng 宮城) [For two traditional city wall plans from a c. 1330 edition of Shilin guangji 事林廣記, see Figures 1 and 2; for Stephen West’s reconstructed map of the city c. 1100, see Figure 3]. All three walls were pre-Song in plan, but all were extensively rebuilt in the tenth, eleventh, and twelfth centuries. Originally constructed of tamped earth, all three walls were later clad in mortared brick and stone facings to make them fireproof and shatterproof, thereby attenuating the impact of

12 Wujing zongyao qianji, chap. 12, p. 1b. The quotation is from “Nine Transformations” chapter of Sunzi’s The Art of War. For a paraphrase of Zeng, see Joseph Needham and Robin Yates et al. (1994), p. 260.
13 See Jones (1999), pp. 165-166.
14 The total enclosed area of the Song-era city was 53 square kilometres, of which the Palace Wall enclosed 1.3%, the Inner Wall 6.4%, and the Outer Wall 92.3%. See Wang Mingsun (2008a), p. 235.
artillery bombardment, which had come to play a major offensive role in urban sieges.\textsuperscript{15} Used in China from the seventh century onwards, trebuchets (paoche 砲車) could hurl heavy stone balls and incendiaries in high curved arcs against city walls, giving besiegers an advantage over defenders.\textsuperscript{16} Their various permutations were described and illustrated in Zeng Gongliang’s 曾公亮 (999-1078) Wujing zongyao qianji 武經總要前集 of 1044 [see Figure 4 for one example].\textsuperscript{17} Moreover, Kaifeng’s city walls were thickened in several phases to diffuse the impact of artillery barrages.

Counterweighted trebuchets first appeared in medieval Europe around 1200, the result of a Eurasian technology transfer facilitated by Arab middlemen, leading to the development of round donjons and towers, which reduced the area of flat surfaces that were exposed to artillery bombardment.\textsuperscript{18} In the early sixteenth century, Western European military architects developed star fortifications (traces italiennes) to solve this problem. Built from thick layers of brick-faced polygonal earthworks, whose extremities were shaped into diamond-pointed triangular projecting bastions, star fortifications were more defensible than rectilinear walls. Their defenders could use artillery to project overlapping fields of flanking fire, against which besiegers could not find safe zones, and to take out attackers’ cannons before they could approach them directly.\textsuperscript{19} However, in early modern China, city walls generally remained square or rectangular, providing enemy artillery with a direct firing target of perpendicular masonry surfaces and, if besiegers could exploit safe zones to approach the

\textsuperscript{15} Called zhuanbiaoqi 磚包砌, brick facing was first used in the walls of Tang-era Luoyang, and became increasingly common in Southern Song city walls. See Huang Kuanzhong (2001), pp. 39-40. Also see Lorge (2008), p. 29.

\textsuperscript{16} Recently, Stephen Haw has reassessed the fragmentary body of evidence to argue that during the Southern Song-Jin wars, the earliest gunpowder incendiaries were being delivered by artillery as early as the 1130s, and probably by 1161. See Haw (2013), pp. 446-448.

\textsuperscript{17} See Needham and Yates (1994), pp. 211-7. The largest trebuchet described in the Wujing zongyao qianji, a “rectangular trebuchet with seven-component arm” (qishao pao 七梢砲) required a crew of 250 men, and could hurl stones weighing between 91 and 100 jin 斤 (55 kg) up to 50 bu 布 (77.5 metres). See Needham and Yates (1994), pp. 216-218. For the original source, see Wujing zongyao qianji, chap. 12, pp. 41b-42a. Fixed-counterweight or Muslim trebuchets (Huihui pao 回回砲), which dramatically increased the range and weight of projectiles, did not enter general service until the Mongol sieges of the thirteenth century. See Needham and Yates (1994), pp. 218-220, 233-237.

\textsuperscript{18} See Jones (1999), pp. 174-175.

walls, they could mine and excavate them.\textsuperscript{20} As we will see below, protruding \textit{enceintes} called barbicans and bastions were created to minimize attackers’ safe zones and to give defenders a flanking view of besiegers, just as early modern European \textit{traces italiennes} had done.

Moats surrounded all three of Kaifeng’s walls, and the outermost featured several innovative defence installations, including barbicans, watch towers (\textit{loulu 樓櫓}), battlements (\textit{qiangduo 報垛}), bastions (\textit{mamian 馬面}), turrets (\textit{dilou 敵樓}), and \textit{fausses-braye} (\textit{yangmacheng 羊馬城}).\textsuperscript{21} Many of these types of defensive installations, which I will explain in detail below, had never been incorporated into capital city walls before, or used away from the northern frontier. For the imperial court and central government, maintaining and upgrading these defence installations became a costly priority. During the Southern Song, barbicans and bastions became increasingly common in the regional-level cities of Jiangnan, spreading south beyond northern capitals and borderland cities.\textsuperscript{22} Enclosing a broad swathe of urban space, Kaifeng’s highly fortified and militarized walls also provided city residents with a sense of security, reminding them of the defensive capabilities of the state; although they could not prevent urban growth from sprawling beyond its outlines. These connections between Kaifeng’s growth and defensibility will become clearer, once I reconstruct the history of its three concentric walls, which I will describe from the innermost to the outermost, from the oldest to the newest.

The historical and archaeological record of the Palace Wall demonstrates that the Song founders adaptively reused earlier defensive installations when they sited their capital at Kaifeng. The Northern Song imperial palace stood upon at the original site of the offices of the Xuanwu ("Declaring Martial Prowess") regional military governor (Xuanwu \textit{jiedushi 宣武軍節度使}), who was based at Bianzhou and its environs during the late Tang; henceforth, it became the site of imperial palace for four of the Five Dynasties, from the Later Liang dynasty onward.\textsuperscript{23} The Palace Wall was first built during the reign of the Later Tang \textit{後唐} emperor Mingzong 明宗 (r. 926–933), and was expanded and rebuilt during the reign of the Later Zhou \textit{後周} emperor Shizong 世宗 (r. 955–959). At the inception of the Northern Song, dense growth in the city’s central core left no room to


\textsuperscript{21} For a well-documented study of the defensive capabilities of the Outer Wall, see Liu Chunying (2006a), pp. 78–88.

\textsuperscript{22} Huang Kuanzhong (2001), pp. 47–48.

\textsuperscript{23} See Zhou Baozhu (1992), p. 27. The inner city walls of late Tang cities had a propensity to be transformed into the “private palaces” of Five Dynasties warlords. See Needham and Yates (1994), p. 339.
expand the Palace City’s perimeter without demolishing existing urban wards. When Song Taizu’s court set about rebuilding the Palace City Wall starting in 962, the only expandable area was at its north-eastern corner, which housed the residences of the emperor and his consorts.24

For Song literati, the Palace City was the stage upon which emperors performed the art of rulership; its structural flawlessness symbolized the moral perfection of early Song imperial governance. In his brush-notes (biji 筆記) collection Shilin yanyu 石林燕語, Ye Mengde’s 葉夢德 (1077-1148) narrates the Palace City’s architectural history from its Tang beginnings in highly granular detail, digesting older material, until it presents an idealized image of its renovation under emperor Taizu at the dynasty’s inception:

宫成, 太祖坐福甯寢殿, 令闢門前後, 召近臣人觀, 諭曰: “我心端直正如此, 有少偏曲處, 士曹必見之矣!” 羣臣皆再拜。後雖曾經火屢修, 率不敢易其故處矣。When the palace was completed, emperor Taizu sat in the Funing [Pavilion] that served as his sleeping quarters, and ordered that its front and back gates be opened, and summoned his closest ministers to come in to see it. He said: “My heart is as straight and upright as this [building], and if there were ever the slightest deviation, you fellows certainly would be able to see it!” The various officials all bowed again. After this, even though it went through fire and multiple renovations, in general, none dared to alter the original location.25

As Ye Mengde recorded in this narrative, Taizu used the unwavering straightness of the palace halls and the rectilinearity of their walled compounds as metaphors for his own upright heart and, by extension, the perfect boundaries of the Song Empire. While Ye was writing his memoirs in the final years of the Northern Song (his preface probably dates to 1130),26 his nostalgia for the earliest years of the dynasty is palpable. While

24 Song shi, chap. 85, p. 2097; Song huiyao jigao, ‘Fangyu’ 方域, chap. 1, p. 11b. For Meng Yuanlao’s fuller description of the interior of the Palace City, see Dongjing menghua lu jianzhu, ‘Danei 大內,’ chap. 1, p. 40.

25 Shilin yanyu, chap. 1, pp. 2-3. The Northern Song memoirist Shao Bowen 邵伯温 (1057-1134) gave a similar account, with slightly differing details but roughly synonymous language. See Shaoshi wenjian lu, chap. 1, p. 5. Thanks to Michael Fuller for suggesting “you fellows” or “comrades” as a translation for rucao 汝曹. Michael Fuller, personal communication, 19 December 2012.

26 For an exhaustive textual analysis of Shilin yanyu, and a plausible explanation of the date of its compilation as 1130 rather than 1128, as stated in its preface, see Fang Jianxin (1987).
acknowledging that the imperial palace’s central audience hall was repeatedly destroyed and rebuilt, Ye claims that the reconstructed version was identical to the original, physically preserving Taizu’s legacy. As we will see below, the vocabulary and themes of Ye’s account overlap with other nostalgic accounts of Taizu and the construction of the capital’s walled spaces.

Plans to enlarge the Palace City’s footprint were postponed and finally scrapped, after both Taizu and Taizong’s courts decided against razing the surrounding wards and relocating their displaced inhabitants. Consequently, for most of the dynasty, the Palace Wall was a rectangle only five li 里 (2800 metres) in circumference, enclosing approximately 0.4 square kilometres (by comparison, the palace city walls of Tang-dynasty Chang’an were more than double its circumference).\(^27\) Like the Outer Wall, the Palace Wall was originally made out of tamped earth. Its defensive capabilities were not upgraded until 1012, after the conclusion of the Treaty of Chanyuan (Chanyuan zhi meng 遼夏之盟), when emperor Zhenzong 真宗 (r. 997-1022) proclaimed that it should be clad in brick and stone.\(^28\) It was not until 1113-1114 that Huizong’s court decided to demolish neighbourhoods to the north of the Palace City to make way for the expanded Yanfu Palace 延福宮, whose wall had a circumference of nine li 30 bu (5086 metres); this addition roughly quadrupled the area of the Palace City.\(^29\) Southern Song memoirists, who generally blamed imperial extravagance as a primary factor of the dynasty’s moral decline and territorial violation, condemned Huizong’s palace expansion as being wasteful and extravagant.

The city’s intermediate defensive perimeter, the Inner Wall, popularly known as the Old Wall (jiucheng 舊城), was also built upon Tang-era foundations.\(^30\) In the late eighth century, Bianzhou served as the base of a

\(^{27}\) *Song shi*, chap. 85, p. 2097; *Song huiyao jigao*, ‘Fangyu,’ chap. 1, p. 2b. See also Zhou Baozhu (1992), p. 28; and Wang Mingsun (2008a), p. 232. According to Zhang Yuhuan’s estimate, the Palace City wall was 900 metres long from north to south, and 200 metres wide from east to west. See Zhang Yuhuan (2009), p. 99. I will be using approximate metric conversions based on Wu Chengluo (1993), pp. 64-66. According to this, one Song-era chi 尺 equals approximately 0.31 metres, one Song-era bu 步 equals approximately 1.55 metres, and one Song-era li 里 equals approximately 560 metres.

\(^{28}\) *Xu zizhi tongjian*, chap. 77, p. 1754. For studies of the Treaty of Chanyuan, see Schwarz-Schilling (1959) and Lau (2000).


\(^{30}\) For a detailed archaeological report on the Inner Wall, see Kaifeng Songcheng kaogu dui (1996).
succession of Xuanwu regional military governors, among whom Li Mian 李勉 (717-788) either added a new section to the existing wall or, more likely, built an entirely new wall, in 781.31 This Inner City Wall was 20 li 155 bu (11,440 metres) in circumference, enclosing an area of 8.3 square kilometres, even as the city’s residential and commercial areas sprawled far beyond its confines.32 The wall was penetrated by seven land gates, and two water gates (shuimen 水門) were reconstructed in 798 for the entry and exit points of the Bian River.33 It underwent substantial repairs in 1.952,34 during the reign of the Later Zhou emperor Taizu 太祖 (r. 951-954), when 55,000 labourers were recorded as being involved in the project.35 Approximately ten metres thick and eight metres high, its tamped earth core was clad with bricks, and its base covered in stonework.36 Three more gates were opened up during the Northern Song, presumably to improve traffic flow between the Outer and Inner Cities.37 Although the wall underwent several small-scale repairs in 1049 and 1064, a large-scale renovation programme was not proposed until 1124, and the plans apparently were...
never realized.\(^{38}\) Below, I will analyze Yue Ke’s heavily embellished account—picturing the Song founder Taizu completely redesigning the Inner Wall, which was fatally altered by his distant successor Huizong—which is supported by neither textual nor archaeological evidence.

Consequently, when the Jurchens besieged the capital in 1126-1127, the Inner Wall’s ten land gates and two water gates lacked defensive structures such as barbicans and bastions, which had been added to the Outer Wall in the late Northern Song. As a result, the Inner Wall was difficult to protect as a secondary defence line, and suffered heavy damage. When the Jin court established Kaifeng as its main capital, they expanded the Inner Wall’s footprint several hundred metres northward and southward; the wall that surrounds the modern-day city was built upon these early thirteenth-century foundations during the early Hongwu 洪武 (1368-1398) reign of the Ming dynasty\(^{39}\) [for a map of the overlaps between the Song and Ming-Qing walls, see Figure 5]. By the Qing dynasty (1644-1911), the area had suffered so frequently from flooding that the Song Inner Wall was buried several metres underground, beneath layers of Yellow River sediment. The wall passed out of visibility and into memory, until archaeologists started reconstructing its outlines in the late twentieth century.

The Outer Wall, also known as the New Wall (xincheng 新城), formed the capital’s first and strongest line of siege defence.\(^{40}\) Built in 956, during the reign of the Later Zhou emperor Shizong (r. 955-959), its original circumference was 48 li and 233 bu, approximately 27.2 kilometres, and it originally enclosed an area of 46.4 square kilometres.\(^{41}\) Like the other walls, it was constructed of a thick layer of tamped earth clad in brick facings. A long-circulating legend, which made it into the Jin shi 金史, maintains that the wall had been constructed of impervious materials from Hulao Pass 虎牢关 (near modern-day Xingyang 滎阳, Henan):


\(^{39}\) This Ming-Qing wall was 20 li and 190 bu in circumference. See He Wei 和維, Yujian jiwang 愚見紀忘 (Foolish Views and Records to Be Forgotten), quoted in Bianjing yiji zhi, chap. 1, p. 3. See also Kaifeng Songcheng kaogu dui (1992), p. 52. For court debates over this matter during the reign of the Jin emperor Xuanzong 金宣宗 (r. 1213-1223), see Jin shi, chap. 14, p. 322, chap. 160, pp. 2344-2345; cited in Kaifeng Songcheng kaogu dui (1996), p. 69.

\(^{40}\) For a detailed archaeological report on digs at the Outer Wall, see Kaifeng Songcheng kaogu dui (1992).

\(^{41}\) Song shi, chap. 85, p. 2102; Song huiyao jigao, ‘Fangyu,’ chap. 1, p. 1a. An estimated one hundred thousand labourers were involved in its construction. See Jiu Wudai shi, chap. 116, p. 1539. According to Zhang Yuhuan’s estimate, it measured 5800 metres from north to south, and 5800 metres from east to west. See Zhang Yuhuan (2009), p. 100.
The elders had the tradition that, when the [Later] Zhou [emperor] Shizong built the city wall, he selected earth from Hulao to fashion it, so it was as solid and dense as iron, and when it was hit by artillery it would only be dented. Archaeological evidence, however, as well as basic common sense, calls the veracity of this legend into question. Shipping massive quantities of dirt over more than a hundred kilometres (approximately 200 li) from the western outskirts of Zhengzhou to Kaifeng was well beyond the capacity of pre-modern transport technology. Reports from twenty-five years of excavations around the Outer City Wall confirm that the vast majority of the tamped earth used therein was, in fact, locally sourced, dug directly from the trench that would become its moat, with a small quantity of Hulao loam used as an adhesive layer to bind horizontal layers of tamped earth.

Another oft-repeated narrative about the wall’s planning and construction first surfaced in Zhang Shunmin’s 張舜民 (jinshi 1065) brushnotes collection, Huaman lu 畫墁錄:

When Zhou Shizu [aka Shizong] was opening up the outskirts of Bianjing, he ascended the Vermilion Bird Gate. He dispatched [Zhao Kuangyin, the future Song emperor] Taizu to ride his horse, and took the place where the horse’s energy was exhausted as the [location in which to build the] wall. This impressionistically indicates how much space was enclosed by this new wall, which demarcated the outer urban boundary of Kaifeng, and how far removed it was from the Inner Wall. More pragmatically, riding until the horse was exhausted would create a defensive zone wide and deep enough to absorb an initial attack through the outer wall. By retroactively embedding Song Taizu into the history of the Outer City Wall, and inscribing him into Kaifeng’s urban space, Zhang’s account involves the future ruler in the planning of his capital city alongside Zhou Shizong. In a telling example of foreshadowing, Taizu is depicted riding southwards

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42 Jin shi, chap. 113, p. 2496.  
44 Liu Chunying (2006c), pp. 120f; and Zhi Changyun and Li Hequn (2007), p. 422.  
45 Huaman lu, chap. 1, p. 206.  
46 Peter Lorge, personal communication, 7 May 2011.
from the main southern gate of the Inner Wall, tracing the route of the city’s central axis, the Southern Imperial Avenue (Nan Yujie 南御街), which would become his main procession route in one of his major ritual performances of rulership: the southern suburban sacrifices.47

By roughly quadrupling the walled area of the capital and stipulating a new street system within it, Shizong and his ministers were drawing the basic blueprint along which Northern Song Kaifeng developed.48 In the words of an imperial edict of 955, which authorized the opening up of an ingrown urban landscape:

東京華夷輻輳，水陸會通，時向隆平，日增繁盛，而都城因舊，制度未恢，諸衛軍營，或多窄狭，百司公署，無處興建，加以坊市之中，邸店有限，工商外至，絡繹無窮，僦賃之資，刊登不定，貧乏之戸，供辦實難。而又屋宇交連，街衢湫隘，入夏有暑濕之苦，居常多烟火之憂。將便公私，須廣都邑。宜令所司於京四面，別築羅城。At the Eastern Capital, Chinese people and foreigners converge like the spokes of a wheel, and water and land routes reach to meet there. The times incline towards prosperity and tranquillity, and its prosperity increases by the day. But the capital’s city wall is old, and its plan has not yet been expanded. Of the various army installations, many are narrowly situated; of the hundred officials’ offices, there is nowhere to build them. In addition, inside the wards’ markets, [the number] of inns is limited, and artisans and merchants arrive from outside in an inexhaustible stream. The cost of renting [dwellings] increases in an unpredictable way, so that poor households are truly hard-pressed to afford them. Moreover, houses touch and connect, and the streets and thoroughfares are muddy and narrow. In summer people suffer the humidity and heat, and they are constantly beset with worry about smoke and fire. In order to benefit the public good and the private interest, it is necessary to broaden the capital city. It should be ordered that those in charge will construct a surrounding city wall on all four sides of the capital.49

47 As Meng Yuanlao describes the city’s grand central corridor: 坊巷御街，自宣德樓一直南去，約闊二百餘步。 (The Imperial Avenue’s street ran straight south from the Xuande [Gate] Tower, and was approximately 200-plus bu wide.) See Dongjing menghua lu jianzhu, ‘Yujie’御街, chap. 2, p. 78.


49 Wudai huiyao, chap. 26, p. 417. For the text of emperor Shizong’s 953 edicts which stipulated the width of the city’s street system, committed the central
Shizong’s edict presents the building of a new city wall as a stimulus to both private interest and public good, accelerating commercial growth as well as enhancing the state’s capacity to govern. The Outer Wall was just one element in the Later Zhou court’s far-reaching city plan for Kaifeng, which involved a network of widened avenues and alleyways, with stipulated widths and spacings, which cut through the congested and obstructed streets of their capital. Like the boulevards of Haussmann’s Paris, the central arteries of Zhou Shizong’s Kaifeng were cut through an overgrown thicket of narrow medieval alleys; the new urban regime abandoned rigid Tang-era planning controls, allowing for organic growth within broad guidelines. For instance, it outlawed the digging of graves, the building of brick kilns, and the establishment of markets within a seven-li (approximately four kilometre) boundary of the new city wall. Acknowledging the unfeasibility of the Tang system of walled wards (fang 坊), it created a system in which individual residences were no longer separated from streets by walled wards, but enjoyed direct access to the city’s network of streets and alleys (jiexiang 街巷). More than any later Song ruler, it was Zhou Shizong who was responsible for China’s early-modern urban revolution, in which closed compartments and regulated markets gave way to emergent streetscapes with interpenetrating residential and commercial functions.

To enhance its defensive capabilities, a ten-zhang wide moat, called the ‘Dragon-Protecting River’ (Hulong he 護龍河), surrounded the wall. Zeng... government to the ideal of transport connectivity, and justified these means with similar common-good rhetoric, see Cefu yuangui, chap. 14, pp. 28a-28b.

50 Ning Xin has aptly pointed out that this expansion was as much three-dimensional as two-dimensional, with these new building guidelines permitting residents to build upwards as well as filling out an expanded urban grid. See Ning Xin (2002).


52 In Tang Chang’an, “streets” (jie 街) were originally the grid of corridors that ran outside the orderly array of walled wards (fang 坊), and the corridors inside wards were called “lanes” (qu 曲). In Northern Song Kaifeng, streets and alleys formed the city’s transportation grid, and residences and business premises opened directly up onto them. See Yang Kuan (2006), pp. 293, 313.

53 There is an enormous body of secondary scholarship, which time and space constraints prevent me from summarizing here. Zhou Baozhu has claimed that the razing of residential ward walls coincided with the Later Zhou court’s refashioning of Kaifeng’s urban form. See Zhou Baozhu (1992), p. 233. Yinong Xu has provided the clearest and most sophisticated interpretation of the medieval urban revolution as a new way of planning urban space. See Xu (2000), pp. 67-77.

54 No textual evidence from the Later Zhou can confirm the moat’s existence, and the first mention of the moat occurs in Song huiyao jigao, which records a directive of 4.1005 that bridges above the Outer City Wall should be raised to allow...
Gongliang made some general recommendations for moat design, which describes best defensive practices from the early eleventh century:

壕面各随其地为阔狭, 大要在面阔底狭, 其深及泉, 使箭炮难及即住. As for the surface area of a moat, it can be wide or narrow according to the topography, but mainly it should be wide on the surface but narrow at the bottom, and deep enough to reach [underground] springs, making the [walls] hard to reach with arrows and artillery.\(^{55}\)

Archaeological evidence indicates that the Outer Wall’s moat, in its final Northern Song incarnation, was eleven to thirteen metres deep and more than 30 metres wide. One of the largest public works projects in Northern Song history, a programme to deepen the moat, began in 1075 during Shenzong’s reign, and gathered momentum in 1083, but was stopped for a time during the early Xuanren Regency (1086-1087).\(^{56}\) In a memorial of 5.1089, Fan Zuyu 范祖禹 (1041-1098), the Grand Master of Remonstrance of the Right (You jianyi dafu 右諫議大夫), criticized its excessive dimensions, which were historically unprecedented:

臣聞開濠深一丈五尺, 闊二百五十一步, 廣於汴河三倍, 自古未聞有此城池也. Your servant apprehends that in opening the moat, it is one \(\text{zhang}\) and five \(\text{chi}\) deep, and 251 \(\text{bu}\) wide. This is three times wider than the Bian River, and since antiquity, one has never heard of this [sort of] moated wall.

boats to pass underneath. Most likely, the moat was excavated at the same time the wall was built, and the tamped earth that comprised the wall’s interior came directly from its immediate surroundings. See Song huiyao jigao, ‘Fangyu,’ chap. 13, p. 19b, cited in Liu Chunying (2006c), p. 113.\(^{55}\)

\(^{55}\) Wujing zongyao qianji, chap. 12, p. 2b.

\(^{56}\) For the 1082 edict that initiated its construction and specified dimensions for its construction, see Song huiyao jigao, ‘Fangyu,’ chap. 1, p. 17a. Conforming to Zeng Gongliang’s specifications that a moat should be wider at the water’s surface than its bottom, it was 50 \(\text{bu}\) wide at the top, 40 \(\text{bu}\) wide at the bottom, and one \(\text{zhang}\) five \(\text{chi}\) deep. For the 1083 edict that diverted 50,000 corvée labourers to the moat-widening project, see Xu zizhi tongjian changbian, chap. 340, p. 8185. Several major anti-reform demonstrators, including Su Che 蘇轍 (1039-1112) and Liu Anshi 劉安世 (1048-1125), petitioned the throne to stop the project in the early Yuanyou era. Su complained that the moat-widening project had exposed commoners’ graves in 12.1086, while Liu bemoaned the corrupt activities of its eunuch supervisors in 10.1088. For their memorials, see Xu zizhi tongjian changbian, chap. 370, pp. 8936-8937, and chap. 415, pp. 10097f. See also Zhou Baozhu (1992), pp. 48ff.
More importantly, Fan doubted the need for Zhezong’s court to fortify the capital’s physical defences, when the projection of imperial virtue would suffice to protect the realm from invasion:

新城，周世宗所築，太祖因之，建都於此，百三十年，無山川之險，所恃者在修德，在用人，在得民心，此三者，累聖所以遺後嗣子孫也。As for the New City Wall, it was constructed by Zhou Shizong, followed by [Song] Taizu, who established the capital here. For 130 years, lacking the strategic defences of mountains or rivers, what has been relied upon [in its defence] is the cultivation of virtue, the employment of [able] men, and the obtaining of the common people’s hearts. These three have been bequeathed by repeated sages to their sons and grandsons.57

As we will see below, Fan’s austerity-driven objections to the scale and expense of the wall’s fortifications went unheeded by the court of Empress Dowager Xuanren (1032–1093, regent 1085-1093), then serving as regent for the young emperor Zhezong (r. 1085-1100). A project to deepen the moat continued to elicit hostile remonstrance. The following month, Liang Tao (1035–1097), the Grand Master of Remonstrance of the Left (Zuo jianyi dafu 左諫議大夫) memorialized:

臣伏聞元祐初，中旨罷修京師城隍，都人之心，上下安悅，歌呼鼓舞，傾動里郭。一日復興大役，羣情預為憂恐，況重困民力，以來怨嗟，輕損國用，其費浩瀚。朝廷以人情未靜為恤，此非安民之道也；以才力未饒為念，此非節財之理也。此役一罷，兩利俱得，誠為急務，願留宸斷。Your servant has apprehended that at the beginning of the Yuanyou reign-period [1086], when an imperial decree halted reconstruction of the capital’s city wall, the hearts of the people of the capital were peaceful and joyous above and below; they sang and shouted, drummed, and danced, shaking the inner-city alleys and outskirts. But one day, a great corvée service was resumed, and collective feelings became vexed and fearful ahead of the corvée. Moreover, to again exhaust the common people’s energies will bring forth resentful sighs, and when the polity’s resources are casually destroyed, the waste will be endless. If the court considers that the human emotions have not yet been

57 Fan Zuyu 范祖禹, ‘Lun chenghao’ 論城壕 (“A Discourse on Walls and Moats”), in Fan Taishi ji, chap. 15, pp. 6b-8b. See also Xu zizhi tongjian changbian, chap. 428, pp. 10346f.
quiet as an object of pity, then this is not the Way to bring security to the common people; if it considers that neither human capital nor human energies are yet replete, then this is not the correct principle of regulating resources. Once this corvée obligation is abolished, both advantages can be obtained. Truly, this is an urgent matter, and I willingly await Your decision.\textsuperscript{38}

For anti-reformist remonstrators like Liang Tao, with their antipathy towards activist governance, such an exhaustive effort to improve the city’s defences seemed a waste of financial and human capital. Based on static assumptions about moral economy, his argument elides the moat’s defensive purposes, instead portraying it as a bottomless money pit. At the time, the northern and western sides of the moat had been deepened, and work on the other two sides had just begun.\textsuperscript{39} Such a half-finished moat was a glaring defence liability, and work on the project finally concluded in 1094, the first year of Zhezong’s personal rule. This widened barrier did not deter the Jurchen invaders during their first siege of Kaifeng in 11126, when they succeeded in crossing the moat, attacking the wall’s gates, and scaling the wall with cloud-ladders (\textit{yunti 雲梯}).\textsuperscript{40}

During the Northern Song, the Outer City Wall underwent ten documented renovation projects, three of them major, making Kaifeng’s outer defensive perimeter more frequently overhauled than its two inner counterparts. During Taiz\'u’s reign, the wall was repaired in the first month of 968, which roughly coincided with the enlargement of the Palace City Wall.\textsuperscript{41} In the wake of the Khitan Liao invasion campaign of 1004, which exposed the city’s vulnerable defences, Zhenzong ordered a more exhaustive renovation programme in 1008, which involved the repair of gaps in its crenellations (\textit{nüqiang 女牆}), the removal of obstructions to its water gates, deploying several hundred thousand troops as labourers.\textsuperscript{42} Archaeological evidence confirms the historical account of the wall’s construction in 956 and reconstruction during the Zhenzong reign: a second vertical layer of tamped earth, eight metres thick, was adhered to the outside of the first vertical layer, which was nineteen metres thick, during the early eleventh

\textsuperscript{38} Xu zizhi tongjian changbian, chap. 429, pp. 10363f.
\textsuperscript{39} See also Liang Tao’s memorial of 6.1089 in Xu zizhi tongjian changbian, chap. 430, p. 10382.
\textsuperscript{40} Xu zizhi tongjian, chap. 96, p. 2506.
\textsuperscript{41} Xu zizhi tongjian changbian, chap. 9, p. 199.
\textsuperscript{42} Song shi, chap. 38, p. 2102; Xu zizhi tongjian changbian, chap. 68, p. 1522. According to Peter Lorge’s glossary, a battlement (\textit{nüqiang 女牆}) is “A low wall atop the main rampart which protects those on top of the wall from missile fire.” See Huang Kuanzhong (2001), p. 50.
century. Zhenzong’s court undertook two more small-scale and thinly-documented repair projects between 1016 and 1018, and another in 1023.

The most radical and thorough reconstruction of the Outer City Wall occurred during the reign of emperor Shenzong 神宗 (r. 1067-1085), and intersected with his court’s ambitious New Policies Reforms and failed military adventurism. In an imperial audience of 8.1075, Shenzong expressed frustration with piecemeal repair efforts, and ordered the eunuch Song Yongchen 宋用臣, his favourite construction expert, to oversee the complete overhaul of the wall. Not only did this project extend the Outer Wall’s circumference by another two li, to 50 li and 165 bu (28,256 metres), but it also made it thicker (five zhang nine chi at the base) and higher (four zhang, with seven-chi parapets). Archaeological evidence confirms that the wall was indeed thickened with a third vertical layer of tamped earth, applied to the outside of the first two layers, between 1075 and 1078. Shenzong’s court also issued planning regulations, which maintained a perimeter of empty space inside (ten bu, 15.5 metres) and outside (fifteen bu, 23.5 metres) the wall as a dedicated ring-road (and possible firebreak), thereby preventing sprawl from obstructing the city’s defences.

Archaeological digs around the Outer Wall, whose remains lie several metres underground, have confirmed these measurements, but have revealed some striking geometrical irregularities. Like the Inner Wall, the Outer Wall is longer along its east-west axis, with the eastern and western sides measuring 7,660 and 7,590 metres and the southern and northern sides measuring 6,990 and 6,940 metres. This adds up to approximately 29,120 metres, which translates to approximately 50 Song-era li, the circumference of the wall after it underwent renovations during the Shenzong reign, and matches up well with my own conversion figure of 28,256 metres. Oddly, the Outer Wall is a rhombus rather than a perfect rectangle, since its sides are slanting and its corners are not perfect right

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64 Song shi, chap. 8, pp. 160, 164; chap. 9, p. 177.
65 For the authoritative narrative of the Shenzong reign and Wang Anshi’s New Policies, see Smith (2009).
66 Xu zizhi tongjian changbian, chap. 267, p. 6552; Song huiyao jigao, ‘Fangyu,’ chap. 1, p. 15a.
67 Xu zizhi tongjian changbian, chap. 293, p. 7148. According to Song huiyao, the expanded wall was 50 li and 165 bu in circumference. See Song huiyao jigao, ‘Fangyu,’ chap. 1, pp. 16a-16b. These measures are more precise than Meng Yuanlao’s estimate: 東都外城, 方圓四十餘里. (The outer wall of the eastern capital was square, with a circumference of more than 40 li.) See Dongjing menghua lu jianzhu, chap. 1, p. 1.
69 Song huiyao jigao, ‘Fangyu,’ chap. 1, p. 16b.
angles. Why did the Later Zhou court deviate from prevailing standards of rectilinearity in capital city planning? First, geographical and hydrological considerations: with the exception of the Cai River, Kaifeng’s other rivers, the Bian River, the Jinshui River, and Five-zhang River, all flow from northwest to southeast, so the wall’s sides were aligned to enable these watercourses to enter and exit the city roughly perpendicular to the wall. Second, geomantic considerations, which space limitations prevent me from discussing here, informed the shape and siting of the Outer City Wall.

Beyond simply extending its circumference, the Shenzong reign’s renovation programme further hardened the Outer City Wall against siege. In its entry on city walls, Gao Cheng’s encyclopedia Shiwu jiyuan makes a special note of this phase of intensive fortification, which began in 1084: “During the Song dynasty, in the Xining reign-period [1068-1077] of emperor Shenzong’s reign, they began to build turrets (dilou) on all four sides, built barbicans (wengcheng), and deepened the moat.” The clearest definitions of these terms have been supplied by Huang Kuanzhong, who emphasizes their central function of dividing and attenuating a siege offensive:

Bastions were projecting earthen platforms added to the facade of the wall which, when besiegers approached or began to scale the wall, allowed the defenders to attack them on three sides. … Barbicans were individual ramparts built in several layers outside the city gate, to deflect direct enemy pressure on the main gate. They could also be used as a base for a defensive sally to diffuse enemy strength.

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70. Its western side is slanted ten to fifteen degrees east of due north; and its southern side is slanted seventy-five to eighty degrees south of due east. For more details on the past twenty-five years’ archaeological digs, see Kaifeng Songcheng kaogu dui (1992), pp. 52f; Liu Chunying (2006c), pp. 114ff.


72. For a general discussion of this issue, see Ihara (2009), pp. 51ff.

73. ‘Jingcheng’ 京城, in Shiwu jiyuan 事物紀原, chap. 6, pp. 41a-41b. For the 1084 edict that launched the project to build bastions and barbicans, see Song huiyao jigao, ‘Fangyu,’ chap. 1, p. 18a. According to Peter Lorge’s glossary, a turret (dilou 敵樓) was: “A small tower, sometimes covered, and frequently of wood, constructed within or upon the line of the rampart or miantian [bastion].” See Huang Kuanzhong (2001), p. 49.

For illustrations of barbicans, bastions, and turrets from *Wujing zongyao qianji* 武經總要前集, see Figures 6 and 7, and note the barbican-shaped semicircular bulges in the outer city wall gates in Figure 2.

First used during the Wei-Jin 魏晉 period, bastions (*mamian* 馬面, literally ‘horse-faces’) had often been built into the walls of border cities and fortifications, but they were absent in the city walls of such interior capital cities as Tang Chang’an and Sui-Tang Luoyang, before they came into use on the North China Plain during the Five Dynasties and Northern Song.⑦5 The most detailed contemporary account of their siege functions comes from Chen Gui’s 陳規 (1072-1141) defence manual *Shoucheng lu* 守城錄, based on his own personal experiences during the Song-Jin wars:

馬面, 舊制六十步一座, 距出城外不減二丈, 闊狹隨地利不固定, 兩邊直顧城腳. Bastions [horse-faces]: Under the old system, these were established every 60 bu, and jutted out outside the wall not less than two zhang, and their width varied according to topographical advantages and was unfixed. From either side [of them] one could look directly at the base of the wall.

其上皆有樓子, 所用木植甚多, 若要畢備, 須用氈皮掛搭, 然不能遮隔大炮, 一為所擊, 無不倒者. 樓子既倒, 守禦人便不得安. Atop of them all were [defensive] towers, which used a great number of timbers. If they are to be fully prepared, one must use hair-carpets or hides that are hung from a pole [on top of the lookout towers], but these cannot keep out large artillery missiles. Once the [hangings] are hit, every one [of them] will fall; once the towers fall, the defenders will no longer feel secure.

或謂須預備樓子, 隨即架立, 是未嘗經歷攻守者之言也. 樓子既倒, 敵必以炮石弓弩並力臨城, 則損害人命至多, 亦不可架立. Some claim that one needs to prepare [new] towers [after the first have fallen], and immediately support and establish them, but these are the words of one who has no experience in siege defence. [This is because] once the towers fall, the enemy will certainly use the combined force of trebuchet stones and crossbows to assault the wall, and then the loss to human life will be so exceedingly great that towers simply cannot be set up.

今仅只於馬面上築高厚墻，中留「品」字空眼，以備瞭望，又可通過槍刀。Now, one only needs to erect high and thick walls atop the bastions, this will leave a cutout shaped like the character *pin* 品 in that wall, which can be used to keep a distant watch [against besiegers] but also can be penetrated with [defenders’] spears and swords.

靠城身兩邊開兩小門，下看城外，可施禦捍之具。Near the body of the wall, open up two small doors [on the bottom of the turrets, from which] one can look straight down on the wall outside, and through which one can apply the implements for defending against them.

墻裡造瓦廈屋，與守禦人避風雨，遇有攻撃，便拆去瓦廈屋。On the inside of the walls, fabricate large structures of stacked tiles, in which the defenders can take shelter from the wind and rain. If they are attacked, then they can tear the roof tiles off the structures [and throw them down at attackers]. Near the wall, erect a tall, large row of crossed timbers, and weave a coarse rope through them crosswise, just like making a plaited bamboo mat. No matter how [the besiegers] attack and strike, they certainly cannot do any harm.  

With lookout towers erected on top, bastions would allow defenders to keep watch against besiegers, and restrain their artillery and infantry from approaching the wall, where it could be bombarded and undermined.

Called *wengcheng* 甕城 (literally, ‘urn walls’) because of their resemblance to earthenware jars, barbicans generally consisted of two or three semicircular walls built outside a gatehouse to harden it against siege artillery. One of the earliest descriptions of a barbican appears in Zeng Gongliang’s *Wujing zongyao qianji*:

門外築甕城 ... 甕城(敵團城角也)有戰棚，棚樓之上有白露屋 ... 其城外甕城，或圓或方，視地形為之，高厚與城等，惟偏開一門，左右各隨其便。On the outside of the wall, construct barbicans ... Barbicans (*dituan* are the corners of the walls) have barbican towers; above barbican towers

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76 For a more detailed late eleventh-century account, see *Shoucheng lu zhuji*, chap. 2, p. 74.
there are casemates\footnote{Stephen West (personal communication, 4 May 2011) suggests that 
\textit{yue luwu} \textit{白露屋} should actually read \textit{bailu wu} \textit{白露屋}, which Peter Lorge’s glossary translates as “casemate... A covered chamber, frequently wooden, constructed on the terreplein (top surface of the wall).” See Huang Kuanzhong (2001), p. 49.} [from which defenders could fire weapons at attackers] … As for the barbicans of outer walls, some of which were round and others square, they are fashioned according to the lay of the land, and are as thick and high as the wall; simply open up one gate on the side, either on the left or right according to convenience.\footnote{Wujing zongyao qianji, chap. 12, pp. 2a-2b.}

As will be explained below, bastions and barbicans served a defensive purpose akin to European \textit{traces italiennes}, by spreading out besiegers’ armies, offering a smaller surface area for head-on artillery bombardment, and providing a means for defenders to cover the entire base of the wall. Since they were not used in Northern Song Kaifeng until the dynasty’s penultimate year, they also enhanced its residents’ sense of security long before they ever repelled a single besieger.

Their addition to the Outer City Wall’s twelve land gates and at least some of its nine water gates, not to mention the project’s massive scale and cost, made it a target for criticism.\footnote{During the Later Zhou dynasty, the wall had ten land gates; to increase traffic flow inside and outside the city, two more gates were added during the Northern Song. See Liu Chunying (2006c), p. 112.} In 9.1075, the Censor (Yushi 吏) Cai Chengxi 蔡承禧 (1035–1084) criticized the scale of the project, which had initially been authorized to employ 5,000 labourers, and which had ballooned to a daily workforce of 10,000 soldiers, who were requisitioning supplies from the locals. A one-time loyal follower of Wang Anshi 王安石 (1021-1086) who defended him against the machinations of his betrayer and successor Lü Huiqing 呂惠卿 (1032–1111), Cai argued that this project was squandering time and resources, and was unnecessarily altering a wall that had worked well enough since the dynasty’s foundation:

兼外城自祖宗以來傳之至此，日月之久，土脈堅緻，麤亦完好，何必高深樓櫓以擬邊疆？I add that the outer wall has been passed down from the time of the dynastic progenitors as far as the present. And despite the long passage of days and months, the structure of its earthen core is solid and fine, and it is enough to restore [just that]. Why is it necessary to heighten and deepen its watchtowers in imitation of the frontier?\footnote{Xu zizhi tongjian changbian, chap. 268, pp. 6561f.}
There is no evidence that the emperor or his grand councillor Wang Anshi heeded Cai’s cautions, and work on the Outer City Wall was completed in 10.1078.

Even during the Regency of the anti-reformist Empress Dowager Xuanren, the court continued to renovate the Outer Wall, by deepening the moat and erecting more barbicans. By 1089, the gates on the northern side of the wall were defended by a barbican, and the other three sides were still under construction. The Outer Wall had four main gates (zhengmen 正門), one for each cardinal direction: the eastern New Song Gate 新宋門, the southern Nanhui Gate 南薰門, the western New Zheng Gate 新鄭門, and the northern New Fengqiu Gate 新封丘門. Since imperial processions exited the city through these gates, they were defended by square two-layered barbicans “with gates aligned in a straight line” (in Meng Yuanlao’s words, zhimen liangchong 直門兩重).

The remaining eight land gates were considered non-central or side gates (pianmen 偏門), and an unspecified number of them were defended by semi-circular three-layered barbicans with staggered openings (in Meng Yuanlao’s description, chengmen jie wencheng sanceng, ququ kaimen 城門皆甕城三層, 屈曲開門), so that entering the city involved a series of twists and turns.

In Fan Zuyu’s memorial on city walls and moats, submitted in 5.1089, he distinguished between the two types of barbicans before summarily dismissing both of them as useless and unsuitable extravagances:

82 Dongjing menghua lu jianzhu, chap. 1, p. 1.
that they wanted to use them to intimidate our enemies from the north, but if the northern enemy indeed broke their treaty and turned south, would high officials just sit here to defend the walls and allow [the enemy] to come? Ever since the wall was restored and the moat was deepened, disputers all consider that “building city walls when there is no foreign army” \(^83\) [the enemy is sure to hold it], or “making ditches around the Duke’s palaces, when there is no bandit army,” \(^84\) and these words cannot but be feared. The northern gates’ barbican walls have already been completed, and to change them back would require heavy labour. Your servant desires and begs that a command be issued to simply make square walls [i.e. barbicans] on the east, west, and south side gates, and that the moat’s width be reduced by two-thirds, and the form of the royal city walls be slightly corrected. This would be considerate towards the common people’s labour, and would save the polity’s resources. \(^85\)

A protégé of Sima Guang 司馬光 (1019-1086) and an opponent of activist government, Fan saw no reason to continue Shenzong’s grand projects after his death. \(^86\) In historical hindsight, his inability to conceive of another invasion from the north seems absurdly obtuse. But beyond his platitudes about austerity, Fan was making an overt distinction between capital cities of the interior and frontier forts, between traditional defence designs and unnecessary innovations. Fan insinuated that the sage-kings of the Zuozhuan would have used virtue to keep their enemies in check and, more

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\(^83\) This refers to the phrase 無喪而懼, 憂必讎焉; 無戎而城, 鬼必保焉. (When there is mourning when no death has occurred, true sorrow is sure to come; when you build city walls when there is no foreign army, your enemies are sure to hold it.) See Chunqiu zuozhuan zhengyi, ‘Xi gong 僖公 Year 5,’ chap. 12, p. 20a.

\(^84\) This appears to refer to the phrase 曰: “某寇將至,” 乃溝公宮. 曰: “秦將襲我.” (It was said that “such-and-such an enemy was arriving,” and then ditches were dug around the duke’s palace. It was said that “Qin will attack us by surprise.” The common people took fright and fled, and Qin consequently seized Liang.) See Chunqiu zuozhuan zhengyi, ‘Xi gong 僖公 Year 19,’ 14.22b. Both of Fan’s allusions to the Zuozhuan refer the reader to historical analogies in which fortifications were overbuilt during peacetime, thereby inviting invasion causing the ruler’s subjects to lose their loyalty.

\(^85\) See Fan Zuyu, ‘Lun chenghao’ 論城壕, in Fan Taishi ji, chap. 15, pp. 6b-8b. See also Xu zizhi tongjian changbian, chap. 428, pp. 10346f.

\(^86\) For another example of Fan Zuyu’s anti-reform political rhetoric, see Levine (2008), pp. 131f. For an analysis of the linkages between Fan Zuyu’s historical and political ideals, see Wang Deyi (1993).
pragmatically, the Song court should place the primary line of defence along the northern border, not at the capital city’s walls. He suggested that lavishing funds on upgrading the capital’s defence would be read by the Khitans as a sign of weakness that would only encourage them to invade, rather than taking the offensive to their borders. Fan also believed that the Song emperors’ moral authority, which radiated outward from the capital in concentric circles, would be far more effective as a deterrent to invasion than any grandiose defences. More importantly, he was making an implicit distinction between essential defence installations and security theatre. Earlier, in 10.1088, Fan Zuyu’s colleague and ally Liu Anshi 刘安世 (1048–1125), the Exhorter of the Right (Youzhengyan 右正言) made a similarly austerity-minded argument about squandering the empire’s limited financial resources upon enhancing the theatrical security of the capital, which was no substitute for a stalwart defence of the frontier from nomadic aggression:

然臣有所甚疑者，特以帝王之都，而高城深池過於邊郡，雉堞樓櫓之跡，隱然相望。若於京師而為受敵之具，其如天下何？What Your Servant finds deeply doubtful is that the capital of an imperial monarch [now] has walls that are higher, and moats that are deeper than those of a border commandery. The traces of its parapets and watchtowers are still faintly gazing at one another. If we make preparations to receive the enemy at the capital, then what will be the [fate of the] empire?87

Despite the opposition from remonstrators like Fan and Liu, the barbican project was completed in 1.1094, and the Outer Wall’s main and side gates were all defended by external fortifications.88

According to the eyewitness account of Meng Yuanlao, who resided in Kaifeng from either 1107 or 1109 until 1126, the wall’s gates on all four sides were defended by barbicans. In two Song envoys’ accounts of their journeys through Kaifeng on their way to the Jin Central Capital of Yanjing 燕京 (modern-day Beijing), we find a description of the Outer City Wall’s barbicans, which substantiate their continued existence in the late twelfth century. In his Beixing rilu 北行日録 of 1169, Lou Yue 楼鑰 (1137-1213) recorded his impressions upon entering Kaifeng through its New Song Gate, the city’s main eastern gate:

我至東京城，改曰南京，新曰東陽，今曰弘仁。城樓雄偉，樓櫓垣塹壯且整。垣植柳如引繩然。先入甕城，上設敵樓，次一甕城，有甕三間，次方入大城，下列三門，冠以大樓。

87 Xu zizhi tongjian changbian, chap. 415, p. 10098.
[We] mounted [our] horses to enter the Eastern Capital, whose name had been changed to the Southern Capital. The New Song Gate was in old times called the Chaoyang [Gate], and is now called the Hongren [Gate]. The gate towers were imposing, and the lookout towers and moat were stout and in good order. The narrow moat was planted with willow trees [as straight as] a pulled rope. We first entered a barbican, above which turrets were erected, then another barbican which was in three sections, and then the great city wall proper, with three gate openings at the bottom arrayed in-line, crowned by a great tower.89

In the 2.9.1177 entry to his Beiyuan lu 北轅錄, the diary of his embassy to the Jin court, Zhou Hui 周煇 (b. 1126) substantiated Lou Yue’s description of this barbican, with almost identical details and vocabulary:

跨馬入新宋门，舊曰朝阳，一名洪仁。樓櫓濠塹甚設。次入甕城，次入大城。We straddled our horses and entered the New Song Gate, formerly called the Chaoyang [Gate], and also called the Hongren [Gate]. The gate towers were imposing, and the lookout towers and moat were stout and in good order. Next we entered a barbican, and then the main [Outer City] wall.90

Recording journeys that were taken eight years apart, both of these accounts appear to confirm that at least one of the city’s main gates, the New Song Gate, was defended by a two-layered barbican, substantiating Meng Yuanlao’s account that main gate barbicans had “straight-line gates with two layers.”

The third major renovations programme was left unfinished during the Zhenghe 政和 (1111–1118) reign-period of the reign of Huizong, whose court had an even greater obsession with megaprojects than his father Shenzong. The details of this aborted project are scant, but might have entailed extending the southern side of the wall in order to make way for residences for imperial princes and consorts.91 This project coincided with other grandiose building projects: his Yanfu Palace, discussed above, and his ‘Hall of Enlightenment’ (Mingtang 明堂).92 At any rate, archaeological

89 Beixing rilu, chap. 1, p. 11. Also see Levine (2013), pp. 393-394.
91 In 2.1116, an edict was promulgated to broaden the city wall. See Song shi, chap. 19, p. 395.
reports about the wall’s outlines do not indicate any expansion beyond the 50-li circumference of the Shenzong-era reconstruction programme.

As archaeological digs continue around Kaifeng’s Outer Wall, focused upon its gates and barbicans, new discoveries will supplement and problematize the limited corpus of primary sources. By using archaeology to fill gaps in the historical record, it is possible to advance some preliminary conclusions about the defensive role of Kaifeng’s city walls and their impact on urban form, and to embed these themes within the larger historical context of Song science and society. Relying on huge massed armies around the capital as its primary defence against invasion, the Northern Song imperial court made the defence of its geographically vulnerable capital a high priority, upgrading the capital’s city walls and moat with innovative technologies to repel besiegers. Its gates reinforced with barbicans, bastions, and turrets, its walls crenellated with merlons and obstructed with moats and fausses-braye, the city was able to withstand two lengthy sieges in 1126-1127, and did not capitulate until after more than twenty days of resistance, when the Jurchen breached its perimeter under the cover of a snowstorm. Escalating arms races have demonstrated that all defensive technologies can be overcome with countermeasures and patience, so we should conclude that the city’s fall was more of a strategic failure than a technological one. At any rate, the successful Jurchen siege of Kaifeng and the threat of future nomadic invasions accelerated the process of the militarization of urban form, so that barbicans and bastions would become standard features in the prefectural-level city walls of Jiangnan in the Southern Song. Barbicans survived in the remains of the city wall of the Yuan-dynasty capital of Dadu 大都 (modern-day Beijing) until the 1960s, and are still preserved in the walls of modern-day Qufu 曲阜 (Shandong).

During the early-modern urban revolution, the expansion of Kaifeng’s walls was a major factor in changes to the form and function of Chinese cities. During the final years of the Five Dynasties, the construction of the Outer Wall far beyond the cramped confines of the Tang-era Inner Wall did more than anything else to open up the urban fabric of Kaifeng, which had inherited the straitened plan of a ninth-century prefectural capital. By cutting through clogged medieval streets and laying out a grid of wide avenues, the Later Zhou court was responsible for creating the conditions for the decline of the Tang system of walled urban wards, and the emergence of streetlife in Northern Song Kaifeng. A set of broad planning guidelines rather than detailed regulations allowed urban growth to occur organically, with interpenetrating commercial and residential functions.

In many of the sources examined above, including imperial edicts, ministerial memorials, and memorabilia literature, we have seen that

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Northern Song subjects identified the capital’s walls with a sense of security, but also with the proper performance of rulership. Kaifeng’s city walls were equally important for what they enclosed than what they excluded; they demarcated a line between urban and rural space, and provided its residents with a physical reminder that the imperial court would defend their lives against invasion and banditry. Defended by barbicans and bastions, its land and water gates were sufficiently permeable to allow the inflow and outflow of commercial traffic, while serving as formidable siege defences. Metaphorically speaking, the straight lines and right angles of the Palace, Inner, and Outer Walls represented the ethical and cosmological principles of imperial rule, made manifest in earth, brick, and stone. After reconstructing the physical form of Kaifeng’s city walls, we next explore how they were perceived by Northern and Southern Song literati, for whom they signified more than just a secure siege defence. As I will demonstrate below, for Meng Yuanlao, the Outer Wall’s perimeter represented the borders of the empire in miniature, as well as the ethical principles of rulership writ large.

Meng Yuanlao: Walls Hiding in Plain Sight, Walls as Security Theatre

The author of the Dongjing menghua lu, the most detailed recollection of late Northern Song Kaifeng, Meng Yuanlao remains an obscure and undocumented figure, but we may assume that he was a wealthy bon vivant who resided there in the early twelfth century.94 According to Stephen West’s educated guess about Meng’s social position, he was most likely “a lower-level bureaucrat from a monied clan” by day and “an educated, but not particularly literate well-heeled man-about-town” by night.95 Everything we know about Meng’s identity comes from his preface, written in 1148, where he describes his arrival in Kaifeng with his father in the twelfth century’s first decade, and his flight from the city for the south in 1126.96 Since West has translated his preface in its entirety, I will only quote a short excerpt, which describes Meng’s state of nostalgia, and his search for lost time:

94 For a German translation of the first three chapters of the Dongjing menghua lu, see Kölla (1996). A translation of the whole text into both German and English is presently being prepared by Stephen H. West and Dorothee Schaab-Hanke.
95 West (1985), pp. 76-77.
In West’s interpretation, Meng was sentimental about his lost youth, since he was around fifteen when he first arrived in Kaifeng, and wrote the text when he was in his sixties. Meng’s narratives were highly spatial as well as temporal, taking the reader on a guided tour from site to site, reimagining the city of his youth and adulthood.

The first entry in the text, ‘The Outer City Wall of the Eastern Capital’ (‘Dongdu waicheng’ 東都外城) embeds the entire city within the confines of the wall, and provides directional reference points to his subsequent recollections. His description of the wall, its moats and gates is the fullest one extant, but we must be wary of treating it as a transparent description. Not only was Meng reconstructing these spaces and sites from memory, but also enveloping them in the afterglow of nostalgia, so that the Outer City Wall evokes a sense of security that both he and the reader apprehend as illusory. Post-conquest readers all understood that these walls and gates were later breached, and that the city they defended was sacked, but Meng’s account is a memory snapshot of the wall as it existed in the final years of the Northern Song, at the height of its technological development and after a major reconstruction programme. As I read Meng’s description, the Outer City Wall provided residents with a sense of secured space, and an awareness of the imperial majesty that maintained this consensual illusion.
ten \textit{zhang} wide. Inside and outside the moat, willows and poplars were planted. Whitewashed walls and vermilion gates forbade people from coming and going.

The wall’s gates are all three-layered barbicans, which have staggered gate openings. Only the Nanxun Gate, the New Zheng Gate, the New Song Gate, and the Fengqiu Gate are straight-line gates with two layers. This is because they are classified as the Four Main Gates, all of which connect to the Imperial Avenues.

The south side of the New Wall had three gates: (1) the main southern gate was the Nanxun Gate; on the wall’s south side was the (2) Chenzhou Gate to the southeast, on the side of which was the Cai River Water Gate; to the southwest was the (3) Dailou Gate, on its [east] side was the Cai River Water Gate. The Cai River’s proper name was the Huimin River, but [was called the Cai River] because it connected [the capital with] Caizhou.

On the east side of the wall, there were four gates: to the southeast was the (1) East Water Gate, where the Bian River flowed out of the city through a water gate. This gate straddled the river, and had iron-wrapped shutter gates. At night, a floodgate hung down to the water’s surface. On both banks, each had a gate to allow pedestrian traffic; they exited through a winged wall, more than 100 \textit{zhang} long, on either bank; next was (2) the New Song Gate; and then (3) the New Cao Gate, then the Northeast Water Gate, which was the water gate of the Five-\textit{zhang} River.

On the west side of the wall, there were four gates, from the southernmost (1) New Zheng Gate; next was the (2) West Water Gate, where the Bian River flowed
into the city through a water gate; next was the (3) Wansheng Gate; next was the (4) Guzi ["Foundation"] Gate; then the (5) Northwest Water Gate, which was the Jinshui River’s water gate.

On the north side, there were four gates. The easternmost was the Chen Bridge Gate (which was the route of Liao ambassadors); the next was the Fengqiu Gate (the road to the northern suburbs); the next was the Suanzao Gate; the next was the Weizhou Gate (These gate names were all popular ones. The proper name of the West Water Gate was Lize, the Zheng Gate was originally the Shuntian Gate, the Guzi Gate was originally the Jinyao Gate).

Every 100 bu [150 metres] along the new wall, bastions and gate houses were installed, with merlons close together. They were repaired day and night, and when one gazes at it, it is lofty and imposing.

As for the roads inside the wall, each is planted with willows and poplars that created shade. Every 200 bu [300 metres] was built a wall-defence armory, where defensive implements were stockpiled. There were twenty Guanggu [Army] soldiers under command, who every day rebuilt and replastered it. This was the special function of the City Wall Bureau, which directed these matters.

When Meng’s account is compared to the historical and archaeological record, how do his perceptions reinforce or contradict the sum of scholarly knowledge about Kaifeng’s Outer City Wall? When read as a subjective

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99 Chen Gui’s *Shoucheng lu* describes the crenellations, which Peter Lorge’s glossary translates as “merlons” (*nútou*), in greater detail: 女頭墻, old system, these were outside the [top of the] wall every six chi. Their height did not exceed five chi, and were fashioned in the shape of the character *shan* 山. In between two merlons a gap was left.) See *Shoucheng lu zhuyi*, chap. 2, p. 72.

100 ’Dongdu waicheng,’ in *Dongjing menghua lu jianzhu*, chap. 1, p. 2.
mirror of Meng’s memories, rather than as a transparent window, how
does it deepen our understanding of the social construction of secure space?
First, he devotes most of his account to guiding his readers through the
spatial orientation of the wall’s perimeter and gates, providing sufficient
geographical knowledge for them to construct a mental map of the city’s
transportation links with its surrounding hinterland. And while Meng does
not provide an accurate measure of the wall’s circumference, his
description of the moat’s width does indeed match up with historical and
archaeological evidence, and provides the reader with a sense of broadly
bounded space. He does not supply any visual descriptions of the wall
itself, since its bricks and stones would have been too obvious to mention
to anyone who had ever seen a city wall; instead, Meng focuses the reader’s
eyes upon the moat, portraying it as a no-man’s land, accentuating its
width and evoking a sense of secured space and imperial majesty. With
“whitewashed walls and vermilion gates [that] forbade people from
coming and going,” the moat was a functioning defence installation, not a
tourist site, one that was cordoned off from the city’s public spaces and
street grid.

Since Meng’s terse description indicates that civilians were prevented
from physically approaching the moat, two specialists have recently
speculated that the Outer City Wall had a secondary shorter wall called a
fausse-braye (yangma qiang 羊馬牆 or yangma cheng 羊馬城), which lay in
between the wall itself and the moat\(^\text{101}\) [see Figure 6 for what might be a
fausse-braye surrounding a barbican]. Zeng Gongliang’s *Wujing zongyao
qianji* describes this as an integral element of a viable siege defence, over
eight chi high and topped by five-chi battlements:

\[
\text{門外築甕城, 城外鑿壕, 去大城約三十步, 上施釣橋, 壕之內
岸築羊馬城, 去大城約十步. On the outside of the gates,
construct barbicans; on the outside of the wall, excavate
moats, to be separated from the main wall by
approximately 30 bu, and above them install a draw-
bridge. On the inner bank of the moat, build a fausse-braye,
to be separated from the main wall by approximately 30
bu.}
\]

\(^{101}\) See Zhi Changyun and Li Hequn (2007), p. 422. According to Peter Lorge’s
glossary, the term *fausse-braye* denotes “The area between the foot of the wall and
the inner edge of the moat (the berm), including a low wall.” See Huang
Kuanzhong (2001), p. 51. According to the *Wujing zongyao qianji*, a *fausse-braye* could
be between eight chi (2.4 metres) and one zhang high, which was dramatically
shorter than the main wall that it enclosed. See Zeng Gongliang, *Wujing zongyao
qianji*, chap. 12, p. 2b. For the classic study of the *fausse-braye* in Tang-Song China,
see Hino (1951).
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If the city were besieged, troops could be hidden behind this shorter external wall, which prevented attackers from filling in the moat and gaining direct access to the city. Zeng Gongliang stipulated that "if the barbican gate was on the left, the fausse-braye's gate was on the right," so that defenders could directly attack besiegers who broke through the outer wall for as long as possible before they reached the main wall. According to Chen Gui's descriptions and prescriptions from the Shoucheng lu:

蓋羊馬城之名，本防寇賊逼逐人民入城，權暫安泊羊馬而已，故皆不以為意，然捍禦寇攘，為利甚薄。As for the name of 'sheep-and-horse-walls,' basically they prevented bandits and felons from driving common people into the walled city, and functioned to temporarily secure sheep and horses, and that was it. Therefore, no one takes it into account. But, in defending against trouble stirred up by bandits, its benefit is miniscule.

當於大城之外，城壕之裡，去城三丈，… 遇有緩急，即出兵在羊馬墻裡作伏兵，正是披城下寨，仍不妨安泊羊馬。They should be outside the great (outer) city walls but inside the moat, separated from the wall by three zhang. … In the event of an emergency, troops can be quickly dispatched inside the fausse-braye to lie in ambush, this is precisely like spreading a stockade out below the city walls; and there is no harm in securing sheep and horses there.

不可去城太遠；太遠則大城上拋磚不能過，太近則不可運轉長槍。大凡攻城，須填平壕，方可到羊馬墻下，使其攻破羊馬墻，亦難為人，人亦不能駐足。It cannot be too far away from the city wall; if it is too far away, then bricks thrown from the main wall will not go beyond it; if it is too close, then [defenders] cannot turn their lances fully around. Generally, in a sustained attack upon the city wall, [attackers] must fill in the moat to ground level before they can reach the base of the fausse-braye. Should they attack and break through the fausse-braye, it will indeed be difficult to enter, and if they enter they will not be able to stop gain a foothold.

攻者止能於所填壕上一路直進，守者可於羊馬墻內兩下夾擊，又大城上磚石如雨下擊，則一面攻城，三面受敵，城內又有小炮可施。Besiegers will only be able to directly

advance along a direct path on top of the filled-in moat, and defenders will be able to make a pincer attack on both sides from inside the *fausse-braye*, and bricks from atop the main wall will fall like rain to strike them. Thus, they attack the city wall on one side, they are met on the other three sides; and inside the city wall a small artillery [piece] can also be used.

凡攻城器械，皆不可直抵城腳。攻計百出，皆有以備之也。Generally, the siege apparatus used to attack walls will in no case be able to directly reach the foot of the wall. Plans for attack may come out by the hundreds, but there will always be something that can be used to prepare against them.¹⁰³

*Fausses-braye* started appearing in walled cities in the Tang, and were increasingly common in the Southern Song, so it is possible that Northern Song Kaifeng was a missing link in its development.

Of all contemporary observers, Meng Yuanlao supplies the fullest extant description of the Outer Wall’s defences, explaining how they rendered it permeable as well as defensible, and amplifying the sense of security that these hardened gatehouses offered residents. The wall’s side gates were defended by “three-layered semicircular barbicans with staggered gate openings,” which produces a mental image of entrants being forced to make hairpin turns through a concave-curved maze. In describing the wall’s main gates, Meng inscribes the emperor’s straight-line proces-sional movements into the capital’s cityscape, something he does in much greater length elsewhere in the text, with his descriptions of courtly rites and festivals. These four gates were the endpoints of the four Imperial Avenues, one for each cardinal direction, which radiated out from the main Xuande Gate of the Palace City Wall’s south face. To Meng, not only did these imposing gatehouses evoke a sense of security, which ultimately proved illusory, but also a sense of imperial majesty. Describing tightly-spaced gatehouses and arsenals, and the frequency of the wall’s upkeep by a dedicated staff, Meng underscores the feeling of secured space. More importantly, he describes the subjective experience of a *flâneur* like himself: “when one gazes at it, it is lofty and imposing.” As both objectively and subjectively secure, the Outer City Wall is a salient example of security theatre, a term I have borrowed from terrorism expert Bruce Schneier, who defines it as “security measures that make people feel more secure without

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... served the primarily psychological function of reaffirming the presence of the Chinese state rather than the purely physical function of making cities and their inhabitants secure against possible sources of danger ... That is not to deny entirely their military function. They were reminders of military power, and they could become bastions of defence, able if necessary to withstand protracted siege ... The city walls of Nanking were, like other acts of government, designed to reinforce that mystique [of political legitimacy] and maintain the awesome sense of the government’s presence. That, I would hypothesize, is their primary significance in Chinese cultural history and in the study of the city in traditional China.¹⁰⁵

However, one wonders whether this observation holds for Northern Song Kaifeng, since the defensive value of the walls of Ming Nanjing was never tested in practice, while Kaifeng’s walls did actually serve a defensive function during the two Jurchen sieges of 1126-1127, and the Mongol siege of 1232, as well as providing psychological security for its residents. We need to differentiate between what the architects of Kaifeng’s urban defences, who were knowledgeable about how to build walls and gates, perceived in them, and how elite literati onlookers without this expert knowledge interpreted them. Meng Yuanlao is just as interested in explaining the social construction of security as the fact of security, which is the core of my argument. As described in the Dongjing menghua lu, the city walls of Kaifeng evoked imperial authority and involved viewers as participants in constructing and projecting this aura of authority, but the feeling of security they elicited in the city’s residents was a consequence of

¹⁰⁴ Schneier claims that airport security checkpoints and no-fly lists (not to mention gated communities and sport-utility vehicles) are prime contemporary examples of this phenomenon. See Schneier (2009).

their genuine capability to repel anything short of a prolonged artillery siege by Khitans or Jurchens.\textsuperscript{106}

Thus, we should not be too surprised that Meng’s descriptions of Kaifeng’s barbicans are vague about its construction techniques or defensive features, which were only known to military specialists, and do not completely correspond to the archaeological findings, which are the product of an entirely different body of expert knowledge. Around the ruins of two main gates—the southern Nanxun Gate and the western New Zheng Gate—double straight-line gates have been excavated, with two L-shaped enceintes projecting like clasped arms from the wall itself, conforming to Meng’s account. More problematically, the ruins of semicircular barbicans which have been discovered next to side gates, confirming Meng’s description, appear to have been double- rather than triple-layered. The best-documented of these is the New Cao Gate 新曹門 on the Outer Wall’s eastern side, whose surrounding area was excavated, revealing a semicircular barbican wall constructed of tamped earth about 15 metres thick, which was 108 metres long from north to south, and 50 metres wide from east to west.\textsuperscript{107} In both cases, the archaeological team found a curved, c-shaped enceinte projecting from the wall, punctuated by a gate, and embracing a semicircle around the gate opening, but the remains of a second enceinte have not yet been found.\textsuperscript{108} One must question the veracity of Meng’s descriptions of Kaifeng’s barbicans, but I would argue that the impression of bounded and secured space that his description creates is more important than their literal adherence to the archaeological record.

The special type of barbican known as a ‘crutch wall’ (guaizi cheng 柺子城) is another case where archaeological evidence closely matches Meng’s

\textsuperscript{106} Apropos of their dual function as both security theatre and genuine urban defences, Yinong Xu has argued that city walls “conveyed in their prepossessing form a message to all the residents (both urban and rural) of the area; various forces were accorded and life went on under the rule of one single government that was as powerful and reliable as the walls. Thus, the institutionalization of the city wall was kept alive, not by its ancient function of marking boundaries of the city, but by its salient albeit transformed referential function ... what really mattered was not ‘the act of enclosing’ itself, but certain features—either the enclosing agent or what was enclosed by it—that carried salient meanings.” See Xu (2004), pp. 29f.


\textsuperscript{108} Zhi Changyun and Li Hequn insist that this second enceinte will eventually be unearthed, or else it was demolished during the Jin dynasty to expedite traffic flow, leaving no traces behind. See Zhi Changyun and Li Hequn (2007), p. 423.
The East Water Gate of the Bian River (東水門 or 汴河下水門) was perhaps the city’s most crucial entry point, because the river carried the bulk of Kaifeng’s grain supply from Jiangnan. Meng describes how this weak point was tightly defended by these single-layered c-shaped barbicans which were erected outside the wall on both banks of the Bian River. Not surprisingly, the Jurchen attacked this point in 1126 before over-running the water gate. In his *Birong yehua* (避戎夜話), a military narrative of the siege and fall of Kaifeng, Shi Maoliang (石茂良) recorded this incident in clear detail, confirming that *guaizi cheng* had been erected on both banks of the Bian River at some point in the late Northern Song dynasty, and bore the brunt of the first wave of the Jurchen siege:

> 初九日早, 宣化門告急, 又帶一行人往宣化門守御. 南北拐子城皆捍御水門者也, 水門不可遽犯, 故急攻二拐子城, 矢石如雨, 樓橹皆毁壞. On the morning of the ninth day of the first month, the Xuanhua Gate reported an emergency, and [Yao Zhongyou 姚仲友] raised a band of people to go to the Xuanhua Gate to defend it. Since the north and south crutch walls defended the water gates, the water gates could not be quickly assaulted, so therefore [the Jurchens] rapidly attacked the two crutch walls, and the arrows and stones [fell] like rain, and the watchtowers were all destroyed.\[111\]

The remains of one of these winged walls were discovered in 1982, attached to the remains of the eastern Outer Wall, and roughly substantiated Meng Yuanlao and Shi Maoliang’s descriptions: this rectangular barbican measured 130 metres from north to south, and 100 metres from east to west.\[112\] Other water gates had crutch walls, including the West Water Gate of the Bian River (西水門 or 汴河上水門) on the west side of the wall, and the Chenzhou Gate (陳州門), on the Cai River’s east bank, on the wall’s south side.\[113\]

Instead of reading Meng Yuanlao’s description as a photo-realistic record of Kaifeng’s Outer Wall, it makes more sense to interpret it as a subjective record of the senses and emotions that were evoked by the city’s defence perimeter. While many of his descriptions of barbicans and winged walls can be substantiated by textual and archaeological records, his

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\[109\] In Song-era Chinese, the word *guaizi* (柺子) literally a cane or crutch, was used to describe objects with bilateral symmetry. See West (1985), p. 80.


\[112\] See Liu Chunying (2006c), pp. 71f.

description of the Outer Wall evokes a sense of security that was both collective perception and material fact. To Meng, the wall was a material expression of the safety that concentrated armies and urban fortifications offered urban residents, as well as the imperial government that funded and maintained them. Written at the end of his life whilst in exile, Meng’s account is suffused with dramatic irony. Both he and the reader know that these walls were over-run by the Jurchen invaders, and that its defences were ultimately ineffective in deterring two prolonged sieges. We cannot separate these descriptions from the nostalgic and elegiac tone of the Dongjing menghua lu, which recreates a destroyed city and lost time, and both author and reader are aware that this wall was not only permeable but pregnable, and that the residents of Kaifeng had participated in a collective performance of security theatre.

Yue Ke: Wormlike Curves, Right Angles and Dynastic Collapse

After Meng Yuanlao, the most-frequently cited Southern Song description of Kaifeng’s city walls is an anecdote from Yue Ke’s 岳珂 (1183-1234) memorabilia collection Ting shi 程史 (preface 1214), entitled ‘The Old City Walls of Bianjing’ 汴京故城.114 While Yi Yongwen 伊永文 has recently demonstrated that Yue was actually describing the Inner City Wall or Old Wall (舊城), earlier editors of the Dongjing menghua lu erroneously identified this as a description of the Outer Wall.115 Yue claims to be providing a faithful transcription of oral narratives about the design, construction, and reconstruction of Kaifeng’s Inner Wall from emperor Taizu’s reign until the fall of the Northern Song. Both fascinatingly and frustratingly, nearly every major detail in his narrative is contradicted by both the historical and the archaeological records. So, why did Yue present these stories as veracious? Or, at the very least, why did he embellish them for the sake of what he saw as a larger truth?

114 It was reprinted verbatim in the most authoritative Ming-era collection: Bianjing yiji zhi, chap. 1, p. 3. It was also directly copied into the authoritative Qing-era collection: Song Dongjing kao, chap. 1, pp. 3-4. For a broader study of the Ting shi, and Yue Ke’s representations and misrepresentations of Northern Song Kaifeng’s urban spaces, see Levine (2014).

115 See Dongjing menghua lu jianzhu, 1.20-21n1. In his earlier edited and annotated version of the Dongjing menghua lu, Deng Zhichun 鄧之誠 (1887-1960) misidentified Yue Ke’s narrative as a description of the Outer City Wall (xincheng 新城). See Dongjing menghua lu zhu, chap. 1, pp. 22-23n3.
Yue Ke’s identification with his grandfather Yue Fei (1103-1142), the most famous irredentist in Song history, undeniably coloured his perceptions of Kaifeng’s defensive measures and the Northern Song court’s failed defence policies. Traditional historiography portrayed Yue Fei as a heroic martyr for resisting the Jurchen invaders, and for vehemently opposing the policy of appeasement that prevailed at emperor Gaozong’s court. It was Yue Ke who composed his grandfather’s official biography sixty years after his death. Every schoolchild knows that the nefarious grand councillor Qin Hui (1090-1155) engineered Yue Fei’s execution so that his intransigence would not undermine the peace agreement with the Jurchen: the 1142 Treaty of Shaoxing, which irredentist historiography has portrayed as a treasonous act of capitulation to barbarians. Displaced from their native place in Tangyin county, Xiangzhou (modern-day Henan), the Yue lineage joined the diaspora of northerners who resettled in Jiangnan. His father Yue Lin (1130-1192) was born in Yixing, Xiangzhou (modern-day Jiangsu), served around the empire in regional administration, and was notable for his affiliation with Zhu Xi (1130-1200). Yue Ke followed his father from post to post, and was with him when he died in Guangzhou. Apparently, Yue Lin’s last wish was for his son to burnish Yue Fei’s reputation for loyal resistance unto death. Making his home in Jiaxing (modern-day Zhejiang), Yue Ke earned his jinshi degree in the first decade of the thirteenth century, and served in various positions at court and in the provinces.

However, Yue Ke is best known for his prodigious output as a prose writer, especially as one of the primary fashioners of his grandfather’s loyalist legend in Jintuo cuibian (A Collection from Jintuo Ward), a collection of primary sources that documented Yue Fei’s life and death. In his Ting shi, he was a fervent advocate of a more aggressive foreign policy against the Jurchen, urging irredentist campaigns to take back the north, and he was a moralistic critic of what he saw as the weak and decadent political system that appeased the barbarian invaders. He reserved particular hostility for the reformist ministerial regimes of the Shenzong, Zhezong, and Huizong reigns, whose domestic and foreign policies he blamed for the fall of the dynasty. In the excerpt below, Yue Ke exploited the history of the Inner City Wall of Kaifeng as a vehicle for nostalgic yearning, as well as ethico-political critique.

汴京故城 ‘The Old City Walls of Bianjing’

開寶戊辰，藝祖初修汴京，大其城址，曲而宛，如蚓詘焉。In the year [with the cyclical signs] wuchen of the Kaibao
reign-period [968], when emperor Taizu began to reconstruct Bianjing, he expanded the foundations of the walls, which had been crooked and twisted as if an earthworm were twisting [inside them.]

耆老相傳，謂趙中令鳩工奏圖，初取方直，四面皆有門，坊市經緯其間，井井繩列. When the oldest elders transmitted [stories] to one another, they claimed that the Secretariat Director [Zhongshuling 中书令] Zhao Pu 趙普 [922-992] assembled workers and submitted plans. Originally, [they] adopted a straight and square [plan]; each of the four sides had gates, and wards and markets were arranged like the warp and woof of a textile, arrayed like the orderly squares made by the ropes of a net.

上覽而怒，自取筆塗之，命以幅紙作大圈，紆曲縱斜，旁註雲：“依此修築.” 故城即當時遺跡也. When the emperor saw it, he was enraged, and took up the brush himself to cross out [the plan], and ordered a whole piece of paper and drew a large circle on it, which twisted and curved at odd angles. In the margins, he wrote: “Build the m this way.” The old city wall was a legacy of this event. People at the time could not make sense of it, and many criticized it for not being pleasing to the eye.

熙寧乙卯，神宗在位，遂欲改作，購苑中牧豚及內作坊之事，卒不敢更，第增陴而已. In the year [with the cyclical signs] yimao of the Xining reign-period [1075], when emperor Shenzong was on the throne, he desired to make changes to it, but when he contemplated the matter of suckling pigs that were being raised in the [imperial] garden and the matter of the Inner Armory he was, ultimately, unwilling to change [the plan], and simply extended the [wall’s] parapets.

及政和間，蔡京擅國，亟奏廣其規，以便宮室苑囿之奉，命宦侍董其役. When it reached the Zhenghe reign-period [1111-1118], Cai Jing [1040-1126] dominated the polity, and constantly memorialized to expand the scope [of the walls], in order to accommodate palace pavilions and gardens, and ordered eunuchs to oversee the project.
Ari Daniel Levine: Walls and Gates in Song Kaifeng

凡周旋數十里，一撒而方之如矩。墉堞樓櫓，雖甚藻飾，而蕩然無曩時之堅樸矣。The entire circumference was several tens of li, and in one fell swoop he squared the whole just like a carpenter’s square. The walls and watchtowers were greatly ornamented, but they were neither as substantial nor as strong as they had been previously.

一時迄功第賞，侈其事，至以表記，兩命詞科之題，概可想見其張皇也。The whole time, they begged for merit and rewards, and aggrandized the affair, going so far as to mark the event with a commemorative record, and it was twice ordered to be the topic of literary fields [in the examinations]. Generally, one can sense just how exaggerated and frivolous it was.

靖康胡馬南牧，黏罕、斡離不揚鞭城下，有得色，曰："是易攻下。" During the Jingkang reign-period [1126-1127], when the barbarian horses were pastured in the south, Nianhan 黏罕 [Wanyan Zonghan 完顏宗翰, 1080-1137] and Wolibu 於離不 [Wanyan Zongwang 完顏宗望, d. 1127] brandished their whips below the city walls, and they looked pleased when they said: "These will be easy to attack and bring down."

令植炮四隅，隨方而擊之。城既引直，一炮所望，一壁皆不可立，竟以此失守。They ordered the erection of siege artillery at the four corners, and began striking one face, then another. Since the city walls had been drawn out in a straight line, wherever an artillery piece would be aimed, no single wall was able to remain standing. In the end, the demise of the wall was because of this.

沉幾遠睹，至是始驗。宸筆所定圖，承平時藏秘閣，今不復存。The hidden workings and far-sighted vision [of the emperor] was only verified when it came to this point. [The plan] that had been authorized with the imperial brush was stored away in the Imperial Library in peacetime. It no longer exists.118

Yue Ke’s account diverges from the historical and archaeological records by depicting an alternative reality, perhaps deliberately so. First, the Inner City Wall of Kaifeng was a straight-sided rhombus; it was not twisted,

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118 Ting shi, chap. 1, pp. 8f.
crooked, or curved, as Yue claims. Archaeological findings from targeted excavations, such as precisely-dated ceramics and copper cash, indicate that the Inner City Wall was comprised of vertical layers of tamped earth, whose contours were relatively straight lines, not winding or curved, and certainly not twisted “like a bending earthworm.”

Second, the wall was constructed nearly two centuries before Song Taizu ascended the throne, as it was first built by the regional military governor Li Mian in 781, and repaired by the Later Zhou emperor Taizu in the 950s. During the early years of the Northern Song, Taizu’s court could not and did not redesign the wall from scratch, or rebuild it from the foundations up.

Third, the plan of Kaifeng’s Inner City was always an orthogonal grid with a “straight and square plan” from the beginning, when Zhou Shizong’s court established a network of streets and alleys, “like the orderly squares made by the lines of a net,” with detailed planning guidelines. Song Taizu’s court had neither the incentive nor the resources to reweave the city’s urban fabric, which in any case would violate one of the most enduring principles of capital city planning. Wildly curving city walls would have required the Inner City’s rectilinear street grid, as well as its walls and gates, to have been reoriented, a massive and unnecessary public works project of which there is no record. Furthermore, the four Imperial Avenues would have to have been entirely rerouted to align them with the new shape of the walls. So it begs credulity that Taizu had either the intention or the means to radically redesign the city’s plan on his enthronement.

Fourth, while the wall underwent several stages of major repairs, there is no evidence that the shape and form of the Inner Wall were ever dramatically altered. While it is possible that Huizong’s court expanded the confines of the Palace Wall, and also proposed to renovate the Outer Wall, these walls had been roughly square, if not exactly right-angled “just like a carpenter’s square,” from the very beginning.

Fifth, while the Jurchen did ultimately succeed in breaching Kaifeng’s Outer City Wall before over-running its Inner City Wall, which was not defended by barbicans or bastions, Yue Ke underestimates the persistence of its defenders, who held a relatively stronger defence position within right-angled walls, which radically differed from his description.

However, it is unfair to hold Yue Ke to either traditional or modern standards of historical accuracy for, while his narrative suggests that Northern Song political and ideological pressures altered the wall’s form and function, verisimilitude was not his aim. I read this account as an

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120 For an expansion of this argument, see Liu Chunying (2006c), p. 121.
121 Stephen West has cautioned against defining “truthfulness” only in the form of representation based on principles that we in the modern Western world deem
ethico-political allegory, in which the Inner City Wall was a synecdoche for the borders of the empire as well as a metaphor for the rectitude of its rulers.

Yue is also affirming the standard dynastic declension narrative, by linking the Northern Song’s rise, decline and fall to the ethical qualities of emperors Taizu, Shenzong, and Huizong. By condemning the policies of the ministries of the late Northern Song emperors Shenzong and Huizong, he was voicing his own resistance to those who precipitated the “Calamity of Jingkang” and, in a sense, the concept of security theatre also enters into his narrative, which distinguishes the later straightening of the wall, which merely made it appear to be defensible, with its original curved form, which was genuinely defensible. While the Inner City Wall was always rectilinear, and later enhancements made the Outer City Wall much more defensible, these historical facts and interpretations stand in the way of his ethical and political critique.

For Yue Ke, emperor Taizu apotheosized monarchical rectitude and wisdom. Unlike Ye Mengde’s account of the newly-renovated imperial palace compound, whose straight lines and right angles symbolize Taizu’s righteous heart, Yue Ke uses the mirrored metaphor of crookedness. While Ye’s version of Taizu aspirationally equated the uprightness of his own heart with the straightness of the Palace City Wall, Yue pictures Taizu as actively redesigning the Inner City Wall to make its contours more irregular: he tears up the plans for an orthogonal grid surrounded by rectangular walls in a rage, and personally inscribes (literally, rather than on horseback) curving and more defensible outlines upon the blueprint pages. Yue is not attributing a crooked heart or biased mind to Taizu, only a practical knowledge of how fortifications should be designed to provide genuine urban security, as opposed to the theatrical variety. Perhaps Yue is attributing prescience to Taizu, and is insinuating that he foresees what the vain aesthete Huizong would not: that curved walls will prevent a straight-on attack by siege artillery, as the angular projections of a trace italienne or the outward curvature of a barbican might have done. But it is clear here that Taizu, as Yue represents him, takes the defence of his realm seriously, even if it means departing from established notions of defensive architecture and imperial city planning.

Compared to his son Huizong, Shenzong receives more lenient treatment from Yue Ke. He is depicted as planning to alter the city plan and rebuild the Inner Wall, both of which are suggestive of his sweeping New Policies reforms which disrupted the Song economy, and which were continued and expanded by his sons. However, for unknown reasons, Shenzong decides against radical alterations, and simply adds to the

historical or fictional—particularly since “history” and “fiction” are not natural categories but are ultimately cultural and rhetorical forms.’ See West (2006), p. 567.
parapets of the Inner Wall, thereby enhancing its defensive capabilities. But since Shenzong’s New Policies led inexorably to Huizong’s, and the standard dynastic declension narrative usually begins with Shenzong, Yue is portraying his alteration of the wall as the beginning of the dynasty’s end.

In Southern Song accounts of the Northern Song, both court histories and personal memorabilia, the wickedness of Huizong’s nefarious ministers is an unavoidable trope. So is the cliché that Cai Jing was a near-usurper who “dominated the polity” (shangguo 擊國), which is an attempt to shield Huizong from responsibility for the “Calamity of Jingkang.” In any case, Yue Ke blames Cai for persuading Huizong to expand the city walls to “accommodate palace pavilions and gardens,” possibly the historically-documented Yanfu Palace, and “ordering eunuchs to oversee the project,” which would not have been unusual, either. For Yue, imperial pleasure-seeking and eunuch domination denote an emasculation of the moral qualities of rulership, and symbolize imperial decadence in general.

Furthermore, the Inner Wall had become a stage set for security theatre: not only were its corners “square like a carpenter’s-square,” but its “walls and towers were greatly ornamented, but were neither as substantial nor as strong as they had been earlier.” Thus, Cai Jing’s cabal of decadent and corrupt ministers who hollowed out the city walls were the same fifth columnists who hollowed out the empire and made its capital vulnerable to invasion. Therefore, when the Jurchens arrived, the straight and square city wall of Kaifeng had become a laughably tempting target for their siege artillery. For Yue, these invaders were not the only ones responsible for the fall of the Northern Song, because Cai Jing had already weakened Kaifeng’s siege defences by design, before the invasion even began. In Yue’s declension narrative, the physical destruction of the wall undoubtedly represents the violation of the empire’s boundaries, and their overrunning by the Jurchen.

Conclusions and Departures

My analyses of Meng Yuanlao and Yue Ke’s narratives of the Outer and Inner City Walls have demonstrated how urban defences could provide both genuine and psychological security. For residents of Northern Song Kaifeng, the material facts of the city walls were overlaid with a palimpsest

\[122\] For an early study of Cai Jing, see Trauzettel (1964). For a study of the historical demonization of Cai Jing, see Hartman (2006). For an overview of the crafting of a negative historiographic image of Huizong and his ministers, see Levine (2009), pp. 556-559. For the authoritative biography of Huizong, in which Cai Jing appears prominently, see Ebrey (2014), passim.
of individual perceptions and cultural memory, which influenced how its shattered urban defences were commemorated by Southern Song literati in the aftermath of the “Calamity of Jingkang.” I have also demonstrated that, like the nostalgic reconstructions of Meng Yuanlao and Yue Ke, our scholarly knowledge of the memory-sites of Kaifeng is both retroactive and fragmentary. While Northern and Southern Song literati were constructing their own after-images of the walls when they were upright and after they were overrun, contemporary social scientists likewise deploy historical methods and archaeological techniques to reconstruct a destroyed and buried wall. Our theoretical reconstructions of the walls’ bricks and tamped earth need to be distinguished from the memories and emotions that these enclosures evoked in the minds and memories of Northern and Southern Song literati.

For the historian, Kaifeng’s Outer City Wall stood at the confluence of two intersecting longue-durée trajectories in early-modern China: the transformation of siege technology and urban defences, and the organic urban growth and the opening up of urban forms. Composed of thick layers of tamped earth, sheathed in brickwork, and defended by hardened gates, the city walls formed the centerpiece of a defensive strategy that concentrated forces at the political centre to compensate for Kaifeng’s indefensible floodplain site and the loss of the Sixteen Prefectures barrier. For the first time, frontier defence technologies like bastions and barbicans were deployed along a capital city’s perimeter, as harbingers of the increasing use of siege artillery and the militarization of urban form in twelfth- and thirteenth-century China. The construction of the Outer City Wall in the 950s under the Later Zhou dynasty was a major contributing factor to the opening up of Kaifeng’s ingrown medieval centre and the reweaving of its urban fabric as an emergent network of streets and alleys. Northern Song Kaifeng represented the tipping point in China’s early-modern urban transformation, in which closed cities of walled wards gave way to a generative streetscape of interpenetrating commercial and residential functions.

For Northern and Southern Song literati, the city’s walls offered both a sense of genuine military security and involved its residents in a consensual performance of security theatre. Kaifeng’s Outer City Wall served as a metonym for the borders of the empire itself, and their destruction mirrored the dynasty’s collapse under the Jurchen siege of 1126-1127. Meng Yuanlao’s spatial narratives and personal impressions of Kaifeng’s Outer City Wall can be largely supported by the historical and archaeological records as we know them, represented as a bounded and secured space that reflected the Northern Song court’s military capabilities and political confidence, as well as its subjects’ perception of urban security.
Yue Ke’s written record of a dubious oral transmission creates an alternative past and virtual reality, in which the Inner City Wall served as the metonymic object of the dynasty’s declension narrative. Typical of Southern Song literati representations of the late Northern Song court, Yue uses the wall’s reconstruction to blame Huizong’s nefarious ministers for negligently wrecking Taizu’s legacy by prioritizing aesthetics over defence. In both cases, the concept of security theatre allows us to explain how these walls could simultaneously function as efficacious defence installations and be perceived as symbolic defences.

For Meng Yuanlao, writing in exile in the early Southern Song, the Outer Wall in its heyday represented the imperial court at its peak of strength and confidence, yet he effaces the physical fact of the wall, which is notable by its absence. His nostalgic reflections in the *Dongjing menghua lu* are tinged with the knowledge that its defensive capabilities were ultimately built on a consensual illusion, since all of its barbican gates and winged walls failed to prevent the city’s destruction. In Yue Ke’s allegorical retelling, Taizu’s Inner Wall originally provided a genuinely effective siege defence, but Huizong’s nefarious ministers straightened its curves to create a stage set for security theatre, thereby rendering Kaifeng indefensible and subsequently inviting dynastic ruin.

For both Meng and Yue, telling stories about Kaifeng’s walls, and describing their defensibility—both real and imagined—were nostalgic ways of virtually re-inhabiting the capital as it had been before its fall. Like contemporary archaeologists and historians who are reconstructing Kaifeng’s walls from texts and bricks, Southern Song literati were also sifting through ruins, searching for causal patterns that could explain the breaching of a perimeter and the shattering of an empire.
Illustrations

Figure 1. A Plan of the Old City Wall of the Capital
(Jiu jingcheng zhi tu 舊京城之圖)

SOURCE: Shilin guangji, chap. 11, p. 61b.
Figure 2. A Plan of the Outer City Wall of the Capital  
*(Waicheng zhi tu* 外城之圖)

Figure 3. A Map of Kaifeng, c. 1100

Figure 4. A Rectangular Trebuchet with Seven-Component Arm
(qishao pao 七梢砲)

SOURCE: Wujing zongyao qianji, chap. 12, p. 41b.
Figure 5. Archaeological Plan of Kaifeng’s Song and Ming-Qing City Walls

Figure 6. A Barbican (wengcheng 鎮城)

SOURCE: *Wujing zongyao qianji*, chap. 12, pp. 4a-4b.
Figure 7. A Turret (dilou 敵樓) atop a Bastion (mamian 馬面), with a Casemate (bailu wu 白露屋) in the Background

SOURCE: Wujing zongyao qianji, chap. 12, pp. 7a-7b.
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