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Title: CA2 Critique on "Ancient Invisible Cities: Istanbul"

For my critique, I have chosen "Ancient Invisible Cities: Istanbul", presented by Professor Darius Arya. Many hidden mysteries have been brought to light in the documentary, though I felt that there was still more to explore.

The documentary showcased the power of photogrammetry in modelling cities. Using the technique, the team was able to recreate 3D models of ruined monuments such as the Boukoleon Palace, as well as uncover concealed features such as the secret chambers of the Suleymaniye Mosque. Through renderings of the city, the documentary was able to demonstrate its storytelling[1] capabilities. The potential of the technique, however, was not fully discussed in the documentary; it suggests that this experience was only meant for the documentary, and not for the common folk to enjoy. It would have been nice to give mention to the recent developments in this technology[2], so that tourists can look forward to experiencing Istanbul in the same way the host did.

As a Roman archaeologist, Professor Darius Arya established a clear link between Istanbul and the rest of the Roman Empire, often making comparisons with other Roman cities. It was wildly interesting to see him bring his own perspective to the table; he actively engaged the local experts in two-sided conversation. He

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[1] Ted Frank, "Data Visualization: The Power of Storytelling," Data Visualization: The Power of Storytelling, accessed March 4, 2022,
https://www.emerald.com/insight/content/doi/10.1108/978-1-83909-694-520211019/full/html.
[2] C. L. Kang et al., "The Application of UAV Oblique Photogrammetry in Smart Tourism: A Case Study of Longji Terraced Scenic Spot in Guangxi Province," NASA/ADS, accessed February 26, 2022,
https://ui.adsabs.harvard.edu/abs/2020ISPAr4210..575K/abstract.

consistently expressed passion in his words, making it easier for viewers to feel the same level of enthusiasm. To illustrate, he was instantly able to connect the Hippodrome to the Colosseum, sharing how Roman entertainment was intense and attracted all kinds of spectators. Furthermore, when walking along the Aqueducts of Valens, he displayed zeal in defending the aqueducts in Rome. I would have liked for him to highlight other key differences between Istanbul and Rome.

A common topic in the documentary was Istanbul's engineering prowess. Using the same 3D scans, the team pinpointed various characteristic features, such as the ingenious load-transferring pendentives, which enabled tall structures like the Hagia Sophia to withstand centuries of natural disasters. However, seeing that they had access to this data, it would have been refreshing to have architect Matt Shaw come in at more points in the documentary to elaborate on why these engineering choices are revered, maybe even as a co-host.

Istanbul's thoughtful design choices were further evident in the Suleymaniye Complex. In particular, I was surprised at its solution to preventing discrimination when serving food and providing utilities. In modern society, such non-discriminatory design is enforced through methods like ADA/508 compliance[3].

The documentary showcased Istanbul's consistent preparedness for a growing population. This is evidenced by the repurposing of the Hippodrome into a cistern, and the building of an extensive aqueduct network. Through visualisations, the documentary accurately portrayed the significance and scale of these water security features, improving well-being and food security[4] during times of crisis.

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[3] D.E. Wittkower, "Principles of Anti-Discriminatory Design," accessed March 4, 2022, https://www.researchgate.net/publication/307940347_Principles_of_anti-discriminatory_design.
[4] Sera L Young et al., "Perspective: The Importance of Water Security for Ensuring Food Security, Good Nutrition, and Well-Being," OUP Academic (Oxford University Press, February 18, 2021), https://academic.oup.com/advances/article/12/4/1058/6144691.

The documentary detailed Istanbul's defence via the Great Chain of the Golden Horn. It not only visualised its strength in blocking the inlet, but also revealed how those defences were successfully circumvented by Sultan Mehmet II. The host personally showed us that the chain was indeed powerful, having survived to this day.

I felt that not enough storytelling was done for the Ottoman period of Istanbul. Although a select few developments like Rumelihisari and Suleymaniye Mosque were explored, many important milestones and monuments were glossed over. Future documentaries could elaborate on Istanbul's role as a commercial city and the growth of the Grand Bazaar[5].

In conclusion, rather than just stating facts, the documentary made good use of visualisations to show their key points. However, it could have been supplemented by more technical resources elaborating on the architectural or historical points.

[5] Sharon Wohl, "The Grand Bazaar in Istanbul: The Emergent Unfolding of a Complex Adaptive System," DSpace Angular, accessed March 4, 2022, https://dr.lib.iastate.edu/entities/publication/20c6f72d-ca1c-473a-ac58-aa436d57e451.

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