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Tourism & the Built Environment: Gehry's Blossoming Beacons vs. a Paradisiacal Polder

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Abstract: This paper explores the differences in 'affect' between Gehry's blossoming beacons, whose visibility in the landscape lends them the role of beckoning flowers and the comparable invisibility of Floriade Expo 2022, whose horizontality granted it a subtlety that has thus far failed to elicit any of the thrill associated with the 'Bilbao Effect', even though it proffers an unparalleled botanical paradise. Thus far, it seems that people find biodiverse parks less impressive than buildings, even though thousands of people have worked tirelessly to ensure its viability. One year later, however, people are reevaluating flower shows' ecological costs.

I. THE 'BILBAO EFFECT'

Four years after the opening of the Guggenheim Museum Bilbao, designed by Frank Gehry, the art critic Robert Hughes coined the term the 'Bilbao effect' to characterise the way powerful architecture spurs tourism.¹ Ever since, the strategy of using architecture either to jump-start post-industrial communities or to lure visitors to out of the way places has been replicated in dozens of communities across the globe to varying degrees of success. In Europe, the range of buildings designed by Gehry's firm include: the Vitra Design Museum (1989), Weil am Rhein, DE; the Olympic Fish Pavilion (1992), Barcelona, ES; Cinématèque Française (1994), Paris, FR; The Dancing House (1996), Prague, CZ; Guggenheim Museum Bilbao (1997), Bilbao, ES; Gehry Tower (2001), Hannover, DE; Marta Herford (2005) in Herford, DE; Marquès de Riscal (2006), Elciego, ES; Foundation Louis Vuitton (2014),

Paris, FR; LUMA Arles (the Tower) (2021), Arles, FR and Prospect Place (2022), London, UK. The ‘Bilbao effect’ is no less attributable to buildings designed by Santiago Calatrava, Norman Foster, Zaha Hadid, Herzog and de Meuron, Rem Koolhaas, Daniel Libeskind, Jean Nouvel, I.M. Pei, Renzo Piano, Christian de Portzamparc, Richard Rogers, etc.²

Despite the number of architects whose talents have been harnessed to perpetuate the ‘Bilbao effect’, Gehry’s oeuvre is my focus here, since critics routinely compare his buildings to floral arrangements. In fact, my title’s characterising his buildings as ‘blossoming beacons’ resonates with assessments such as: ‘a corsage for Chicago’,³ ‘the rose-shaped building’,⁴ ‘the beautiful flower that Frank Gehry put in a Paris garden’,⁵ Londoners nick-naming his Battersea apartments the ‘Flower Tower’.⁶ In fact, Gehry himself predicted that his Chicago bandshell would look ‘like a bouquet of flowers on the table’.⁷ In light of Gehry’s buildings’ apparent resemblance to flowers, bouquets, corsages and botanical specimens, they provide a floral counterpoint to Hortus, a ‘green city’ soon to sprout atop a polder occupying the Weerwater, an artificial lake in the heart of Almere. On the occasion of Floriade Expo 2022, thousands helped transform this polder, whose fifty-year old trees are planted on its northern and eastern edges, into a touristic botanical paradise.

Although the ‘Bilbao effect’ is primarily associated with inhabitable sculptures popping up, another variant concerns cities inviting museums to launch satellite institutions. In June 2015, the Guggenheim Foundation launched a worldwide competition for a new satellite, for which there were 1715 submissions from over 77 countries.⁸ To date, the Solomon R. Guggenheim Museum either operates or has operated satellites in Venice (1951), Soho (1992-2001), Berlin (1997-2013), Bilbao (since 1997), Las Vegas (2001-2008), Guadalajara (2007-2009), Helsinki (its city council rejected this plan in 2016) and Abu Dhabi (2025), while Centre Pompidou has sites in Metz (2010), Málaga (2015) and Brussels (2017) and Musée de Louvre operates satellites in Lens (2015) and Abu Dhabi (2017). It remains to be seen whether these museums are generously sharing their name recognition, expertise and collections, or whether they rather envision global media coverage driving ever more visitors to their flagship institutions.

Of course, the ‘Bilbao effect’ is not without its critics who worry that such strategies engender gentrification and smack of cultural imperialism.⁹ Unless implemented in collaboration with local inhabitants, most efforts to boost the economies of abandoned or underdeveloped neighbourhoods have tended to engender gentrification, if not mass displacement. The claim of cultural imperialism likely refers to the idea of importing starchitects from elsewhere to design a building that local architects could do just as well and for a lot less money. To my lights, the idea of museums taking foreign museums under their wings is less imperialist and more paternalistic, since there’s some underlying assumption that novices need experts to jump-start museums.

From my experience; however, the satellites tend to offer far more pleasurable aesthetic experiences, since focused exhibitions facilitate greater attention to detail and several have carved out thematic niches that distinguish them from their primogenitor. This is especially true of Pompidou-Metz, which favours intriguing group shows over blockbuster solo exhibitions, and the Guggenheims in Bilbao and Venice, which typically present familiar artworks in innovative contexts. The satellites don't just function as 'retail outlets' for collection items otherwise hidden in storage. For example, Guggenheim Bilbao's 2020-2021 Kandinsky exhibition was drawn from its vast Kandinsky stockpile, yet its focus on the influence of embryology, zoology and botany on his later paintings lent an unusual twist to familiar paintings.

What interests me here is less the 'Bilbao effect', but the difference in 'affect' between Gehry's blossoming beacons, whose visibility in the landscape lends them the role of beckoning flowers and the comparable invisibility of an artificial island, whose horizontality grants it a subtlety that has thus far failed to elicit any of the thrill associated with new Gehry buildings, even though it actually offers people an unparalleled botanical paradise. Perhaps it will take more time to be appreciated. Meanwhile, one might assume that people find biodiverse parks less impressive than buildings, even though thousands of people have worked tirelessly to ensure its viability.

II. FLORIADE EXPO 2022

Anyone who perused Dutch newspapers or chatted with Amsterdammers during the summer of 2022 immediately sensed the unpopularity of Expo Floriade 2022, whose theme was 'Growing Green Cities', a concept meant to update the early 20th century notion of 'garden cities'. Floriade Expo 2022 aimed 'to be greener, more productive and more sustainable than ever'.¹⁰ Despite Floriade's being a world-renowned event convened decennially to showcase Dutch horticultural ingenuity, this 64-hectare version was dismissed as a flop from the get-go due to cost overruns and its ecological approach, which apparently sounds unappealing. Since the three prior Floriades lost money, it seems odd that people expected this one to flourish financially. Six months after Floriade 2022 ended, the Nederlandse Tuinbouwraad (the Dutch Horticultural Council) declared this seventh edition its last. Since its first edition in 1962; however, the world flower market has blossomed to include exports from Columbia (15%), Ecuador (8%), Kenya (6.5%), Ethiopia (2.3%), yet the Netherlands retains some 51% of the global market. With so many nations producing water-thirsty flowers for wealthy consumers at the expense of food production, it seems that Floriade's bloom has finally faded.

Much to my surprise, Floriade Expo 2022 took place on a man-made pentagon-shaped island located on the Weerwater, an artificial lake adjacent Almere, a newish city with more than 200,000 inhabitants. In 1976, Almere's

first house was completed atop the Flevopolder, what many consider the world's largest artificial island. Sited in the former Zuiderzee, this polder comprises the bulk of the Dutch province Flevoland. Some 20 percent of the Netherlands's landmass is derived from polders, created by diverting either seawater or rivers from low-lying lands via dykes. Almere's neighbouring polder will become Hortus, a 'sustainable urban district' comprised of 660 homes. Engineered around the same time as Almere, Hortus' woodland is already 50-years old. It's impressive that engineers charged with generating land for future homes thought to plant thousands of trees. Floriade Expo 2022 thus availed visitors an opportunity to experience a nearly mature forest first-hand, a rare opportunity in the Netherlands, whose landmass comprises the smallest percentage of forests in the EU after Malta.

Those like me who took the train to Almere likely arrived in Hortus via boat, whilst those who drove parked on the Waterweer's south shore and then transferred to either a shuttle bus or the cable car. Originating near the parking lots, the 'low-energy' cable car carried 2250 people each hour across the major A6 highway, providing riders a massive overview of Floriade 2022's myriad gardens, including 40 international pavilions along its five-minute, 850-meter route. By far the best pavilion was the Amsterdam-Almere pavilion, which not only provided a voice for the trillions of inhabitants sharing these urban habitats, but it showcased locally-grown materials and cities' roles in boosting biodiversity. After watching a fabulous animation, visitors toured outdoor spaces filled with invaluable information about humans and other species, and of course ended with a selfie-opportunity accompanied by actions we can commit ourselves to do.

Other memorable pavilions included the Japanese pavilion, whose 'satoyama' farm, a centuries-old farming technique, won the Grand Prize for its harmony with nature. When I visited, the pavilion was hosting a massive ikebana show. Changing its floral shows bi-monthly, this pavilion won the Gold Prize in the Indoor Garden category. The United Emirates Pavilion, which featured a saltwater garden and showcased a 'biosaline agriculture system' won 'Most Educational Exhibition'. The French Pavilion was created using reconfigurable wooden beams lumbered from a sustainably-managed forest. Taking Biotopia as its theme, the German Pavilion's sprawling rooftop garden was awarded the Gold Prize in the Outdoor Garden category. The Qatari Pavilion, which introduced visitors to its 'green desert' approach, included four 3-D printed domed towers, one of which provides habitat for migrating pigeons, took home the Hospitality Award. The Chinese Pavilion's sprawling bamboo garden, whose arched bamboo bridge linked the garden to the rest of the park, won the Garden Experience Award.

The Belgian Garden Pavilion, whose focus was edible flowers and plants, won the 'Sustainability Award' for its use of fully biodegradable or reusable materials and its minimum carbon footprint. 'Without human intervention, the pavilion could decompose naturally. For example, cross-laminated timber

If building neighbourhoods nestled in greenspace is our future, as American artists, the Harrison Studio's *Green Heart of Holland* first proposed in 1994, then Floriade Expo 2022 originated a strategy for offsetting such costs. Begin by attracting visitors willing to pay an entrance fee to experience an innovative park, much the way cities have hosted the Olympics, World Expos and World Cup games to draw tourist income used to offset costs associated with building much-needed, though prohibitively expensive, infrastructure. That is how Mexico City funded its metro!

Completed in 2009, MVRDV's remarkable master plan for Floriade Expo 2022 focuses on biodiversity in order to ensure the well-being and health of humans and non-humans alike. Thanks to their master plan, the site has been enriched with 6000 trees (2800 are newly planted and donated by Dutch growers) representing 428 species, 90,000 shrubs, 200,000 perennials and 1 million bulbs, all of which took turns blooming during the 6-month run of the show.¹² Their master plan also laid the grounds for a self-sustaining green city capable of producing its own energy and food. This innovative residential district known as Hortus, the green counterpart to Almere's city centre on the Weerwater's north shore, is to be completed by 2030.

Perhaps this plan's most innovative aspect is its land use atop the pentagon-shaped polder and the Waterweer's south shore, which MVRDV divided into 192 developable plots of 1500m² and planted different native tree species on each plot's northern and southern edges. Dendrologist Jaap Smit who calls this Floriade a 'once in a lifetime project', considers this arboretum a 'Tree Library'.¹³ As this image indicates, the plots are organised alphabetically by tree species' Latin botanical names with the A's in the north-west corner and Z's in the south-east corner. As the golden squares indicate, 28 tree species begin with the letter A. Amazingly, every letter is represented. The visibly blank spaces on the pentagon-shaped polder is where trees were planted in 1972. This arboretum builds upon Dutch artist herman de vries' *bomenmuseum* (2008) in Wateringse Veld, a new suburb adjacent Den Haag, where each of the town's 400 streets is lined with a different tree species.

As MVRDV founding partner Winy Maas points out:

This arboretum gives an opportunity to see all the plants of the Dutch climate zone, at the same time showing what they contribute to the green city. That means adding oxygen, capturing carbon dioxide, cooling, climate adaptation, and biodiversity. The arboretum also shows what the plants need in terms of soil, water and maintenance. I hope that a good search and read function will be added to our living tree and plant library so that all this information becomes visible. When the new district is built, a symbiosis can arise between city and landscape and we can test the effect of plants on buildings. The arboretum is therefore also an instrument for increasing knowledge. It

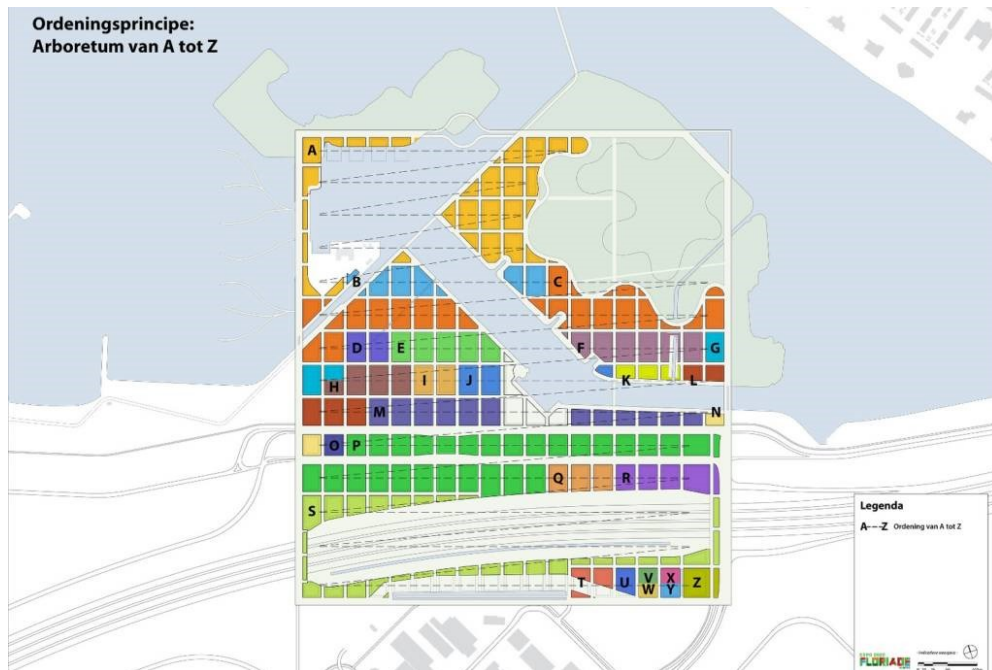


Figure 2: The planting plan

is good that in future the arboretum will be managed, maintained and further developed by an independent foundation, so that the Expo will have a legacy.¹⁴

Smit notes that it's imperative to select trees that will survive climate change. He adds, 'In that sense, it is also a climate arboretum. In Almere, we are lucky to have good sea clay on hand'.¹⁵ Regarding the way tree selections anticipate climate change, he continued,

Our current climate is comparable to that of Dijon, in the middle of France, twenty years ago. The fact that we adapt our trees accordingly is therefore of great significance. In the city, also due to 'urban heat,' there is a continental climate with hot, dry summers. And not all the tree species, including many native ones, can handle it. After all, you plant trees for at least fifty years and then the climate is unfortunately different.¹⁶

III. GROWING GREEN CITIES

While the decision of the Nederlandse Tuinbouwraad to end Floriade was primarily economic, the real cost, which I imagine flower exporters don't want consumers and politicians to consider, is flowers' ecological costs, since imported flowers tend to have carbon footprints 10 times that of homegrown flowers. For example, Valentine's Day 2018 in the United States, the largest

consumer of cut flowers, had a carbon footprint equivalent to that of 78,000 cars driven for an entire year.¹⁷ Moreover, the carbon footprint of flowers sold annually by Walmart equals that of all San Francisco households. The benefits of mass blooms that attract hoards of bees, whose pollen boosts their immune systems, are offset by the greater risks of bees' picking up one of seven parasites associated with colony collapse disorder.¹⁸ Scientists have discovered that rimming fields with hedgerows containing a diversity of perennials reduces bees' exposure to deadly bacteria, which could also explain greater crop productivity.¹⁹ As bee biologist Hamutahl Cohen points out, 'This suggests that in the presence of many flower types, bees disperse and spread across resources, reducing each individual bee's likelihood of encountering an infected individual. Flower diversity may also provide immunity benefits to bees through other mechanisms, perhaps by enhancing nutrition'.²⁰ Hortus' 200,000 perennials provide bees abundant habitat.

Consider that flower growers have depleted half of Kenya's Lake Naivasha, causing fertiliser run-off in addition to the carbon footprint associated with refrigerating, flying and trucking stems 1000s of miles in refrigerated vehicles. When grown in heated greenhouses powered by non-renewable energy sources, even locally-grown flowers can have 5.5 times as high a carbon footprint. Worse still, floriculture workers are typically exposed to chemicals associated with fertilisers, pesticides and preservatives that risk to contaminate both air and water sources. Finally, cut flowers spread residues from insecticides across the world, killing beneficial insects such as pollinators. Unlike food crops, chemicals used to grow flowers escape regulation. By contrast, flowers rated as 'ethical' travel shorter distances, practice Fairtrade methods, have beneficiaries and ensure human care.

What has been lost in the grief surrounding Floriade's closure is the fact that MVRDV, as well as the many international architects and horticulturalists whose hard-won efforts produced such an inventive expo, planted the seeds for future urban projects, even if people have yet to realise it. Instead of creating the type of highly entropic, water-guzzling, splashy floral spectacle that once made Floriade a must-see tourist hotspot, this version posited new models for developing public/private space, whereby private homes stride public parks cared for by landscaping specialists. Not only did Floriade Expo 2022 propose a viable model for growing green cities, such that tourists offset costs associated with creating public space, but it proves that parks can precede buildings. Developers typically clear land prior to building, requiring inhabitants to wait decades for trees and shrubbery to create habitat. By contrast, green cities ought to be creating carbon sinks that enable inhabitants to enjoy the natural environment long before homes are needed.

Truth be told, the 'Bilbao Effect', which people attribute to starchitects' buildings, is largely driven by positive press and global media coverage occasioned by 'powerful architecture' destined to endure decades, not just six short months. No doubt, people's love of flowers has helped to multiply Gehry's

press coverage. Given Floriade Expo 2022's ecological mission, contributors sought ingenious ways to reduce ecological costs. I worry that the public's indifference to Floriade Expo 2022 reflects the fact that journalists expecting a splashy flower show found its mix of woodlands, salt gardens, meadows and seasonal flowers underwhelming. Were the journalists who cover such flower shows actually concerned by such shows' ecological footprints, they would have endlessly praised this edition's innovative strategies. Proof of Floriade Expo 2022's prescience, however, is the fact that critics are starting to scrutinise the Chelsea Flower Show's carbon footprint.²¹ Upon exiting, visitors who actually showed up to Floriade Expo 2022 rated their experiences an 8. I myself felt it was the best experience I've ever had for €33.5 (entrance fee + round-trip boat ride). Expo Floriade 2022 was a real success story, whose import and influence will continue to reveal itself in years to come.

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NOTES

- ¹Interesting Engineering 2023.
²The 'Bilbao effect' is also being tested in Lusanga, DRC, where the Dutch artist Renzo Martens commissioned Koolhaas' OMA to design the White Cube (2017) to display artworks by local artists exhibiting collectively as the Cercle d'Art des Travailleurs de Plantation Congolese (CATPC). Curator Hicham Khalidi and Renzo Martens will present simultaneous exhibitions of CATPC in the Netherland's Rietveld Pavilion at the 2024 Venice Biennale and the White Cube.
³Kent 2000.
⁴Green 2003.
⁵Erika Quiñones Sussman on Pinter-

- est.
⁶Jewell 2014.
⁷Kent 2000.
⁸Testado 2014.
⁹Hedgecoe 2012.
¹⁰Holmes 2022.
¹¹See URLs, belexpo.be.
¹²See floriade.com.
¹³Bos 2022.
¹⁴Holmes 2022.
¹⁵Bos 2022.
¹⁶Bos 2022.
¹⁷Davidson 2021.
¹⁸Cohen 2022.
¹⁹Blaauw and Isaacs 2014.
²⁰Cohen 2022.
²¹Vincent 2022.

REFERENCES

- Blaauw, Brett R., and Rufus Isaacs. 2014. "Flower plantings increase wild bee abundance and the pollination services provided to a pollination-dependent crop." *Journal of Applied Ecology* 51 (4): 890–898.
- Bos, Veerle. 2022. "Floriade is een once in a lifetime project!" *Binnenste-Buiten*, vol. 16 May.
- Cohen, Hamutahl. 2022. "Planting mixes of flowers around farm fields helps keep bees healthy." *The Conversation*, Apr.

- Davidson, Ros. 2021. "The environmental impact of cut flowers? Not so rosy." *ideas.ted.com*, vol. 5 May 2021.
- Green, Emily. 2003. "A bouquet for L.A." *Los Angeles Times*, vol. 16 October 2003.
- Hedgecoe, Guy. 2012. "Bilbao's Guggenheim continues to divide." *dw.com*, vol. 3 June 2012.
- Holmes, Damian. 2022. "Floriade Expo 2022 opens." *World Landscape Architect*, vol. April 2022.
- Interesting Engineering. 2023. "Guggenheim Museum transforming the city with the Bilbao effect." *Interesting Engineering*, vol. 14 April 2023.
- Jewell, Nicole. 2014. "New Images of Battersea Power Station and Frank Gehry's Flower Tower Unveiled as Apartments Hit the Market." *New Images of Battersea Power Station and Frank Gehry's Flower Tower Unveiled as Apartments Hit the Market*, vol. 10 August 2014.
- Kent, Cheryl. 2000. "Art/Architecture; Frank Gehry gives downtown Chicago a Corsage." *The New York Times*, May.
- Testado, Justine. 2014. "What do you think of the Guggenheim Helsinki Stage One entries?" *Architect*, vol. 22 October 2014.
- Vincent, Alice. 2022. "A shadow hangs over this year's Chelsea Flower Show - Our Climate Crisis." *New Statesman*, vol. 25 May 2022.

URLS

Belexpo.be:

<https://belexpo.be/en/news/belexpo-wins-sustainability-award-floriade-2022>

Bos 2022:

<https://binnenstebuiten.kro-ncrv.nl/buitenleven/floriade-is-een-once-in-a-lifetime-project>

Cohen 2022:

<https://theconversation.com/planting-mixes-of-flowers-around-farm-fields-helps-keep-bees-healthy-170527>

Davidson 2021:

<https://ideas.ted.com/the-environmental-impact-of-cut-flowers-not-so-rosy/>

Green 2003:

<https://www.latimes.com/la-hm-greening16oct16-htmstory.html>

Hedgecoe 2012:

<https://www.dw.com/en/bilbaos-guggenheim-continues-to-divide/a-15904659>

Holmes 2022:

<https://worldlandscapearchitect.com/floriade-expo-2022-opens/>

Jewell 2014:

<https://inhabitat.com/foster-partners-release-new-images-of-battersea-power-station-as-apartments-go-on-sale-this-month/>

Kent 2000:

<https://www.nytimes.com/2000/05/21/arts/artarchitecture-frank-gehry-gives-downtown-chicago-a-corsage.html>

Interesting Engineering 2023:

<https://interestingengineering.com/ie-originals/iconic-builds/season-2/ep-10-guggenheim-museum-transforming-the-city-with-the-bilbao-effect>

Testado 2014:

<https://archinect.com/news/article/111893104/what-do-you-think-of-the-guggenheim-helsinki-stage-one-entries>

Vincent 2022:

<https://www.newstatesman.com/culture/nature/2022/05/a-shadow-hangs-over-this-years-chelsea-flower-show-our-climate-crisis>

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