

# **Novel Reasonings for Wild Desires**

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## **Novel Reasonings for Wild Desires**

How strategies of urban green maintenance  
cheapen relationships between humans and plants





*"We have to escape the life of commodity and replace it with the life of community. We have to give up this notion, that human destiny is to manage and control and dominate, and replace it with the idea that human destiny depends, as all other destinies do, on making ourselves better at adapting to the environment."*

Richard Powers, author of *The Overstory*





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## **Abstract**

Urban green maintenance strategies in Eindhoven, Netherlands aim to maintain vegetation by removing spontaneously growing plants and categorizing such as weeds. Considering the current state of ecological crisis and the urgent need for biodiversity, eradicating plants in landscapes with a poor vegetative cover, such as cities, seems illogical. So why do maintenance practices find some plants valuable, and others not? And if current maintenance is counter-productive to the growth of urban vegetation, what is maintenance then really maintaining?

Looking through the critical lens of Cheap Nature, a concept developed by Raj Patel and Jason W. Moore which explores how nature has been devalued through capitalism, the thesis unfolds how current maintenance practices are based on capitalistic strategies which creates unacknowledged consequences to the urban ecosystems.

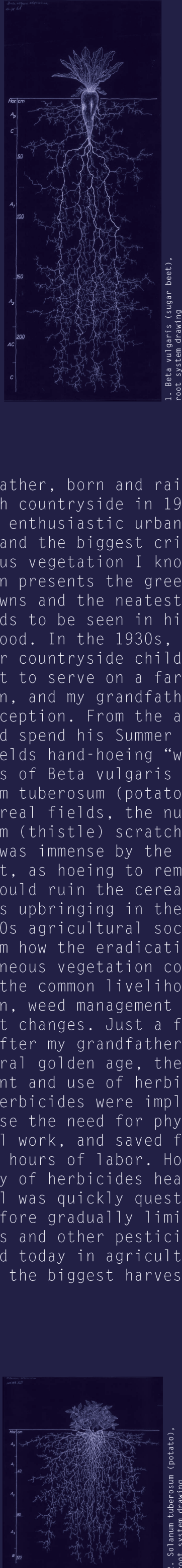
The thesis draws on research and analysis of urban maintenance regulations within the city of Eindhoven, site visits to maintenance service companies and literature reviews. On this basis, the thesis argues that maintenance practices reveal a capitalist legacy of cheapening nature, labor, and their interrelations, which has implications on current cultural values, and which creates a narration the desirable and undesirable. The thesis concludes that what maintenance really maintains is autoimmune mechanisms which sustain cheap systems and create stigmatized societies.

The thesis unfolds the need for maintenance practices to encourage biodiversity and argues the urgency for a change of attitude towards nature and an acceptance of urban landscapes being the result of co-creation between multiple species.

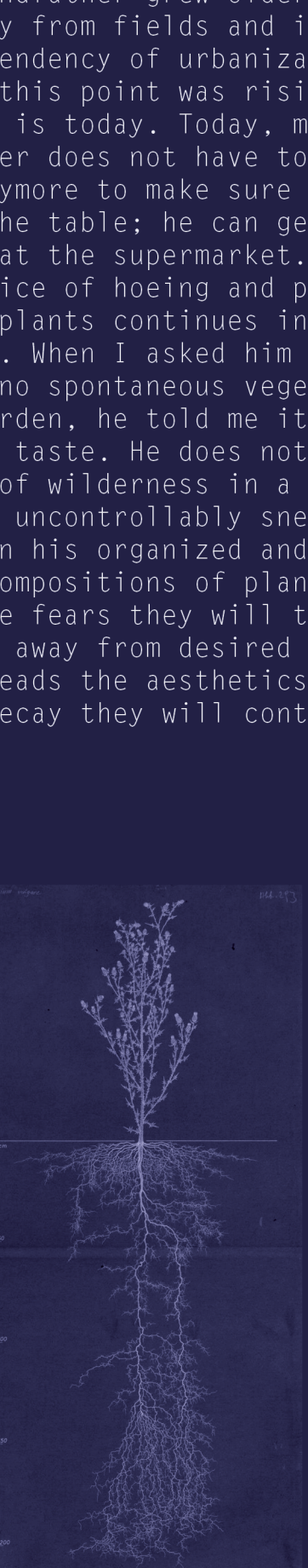
## Dear neighbor

I will be working in the neighborhood for the next few months to explore the possibilities of increasing the quality of the vegetation in the region. My work is based on critical and experimental methods, and you might come across things of unusual character that evoke questions. To embrace such wonder, I would like to give a bit of an explanation of the basis of my actions:

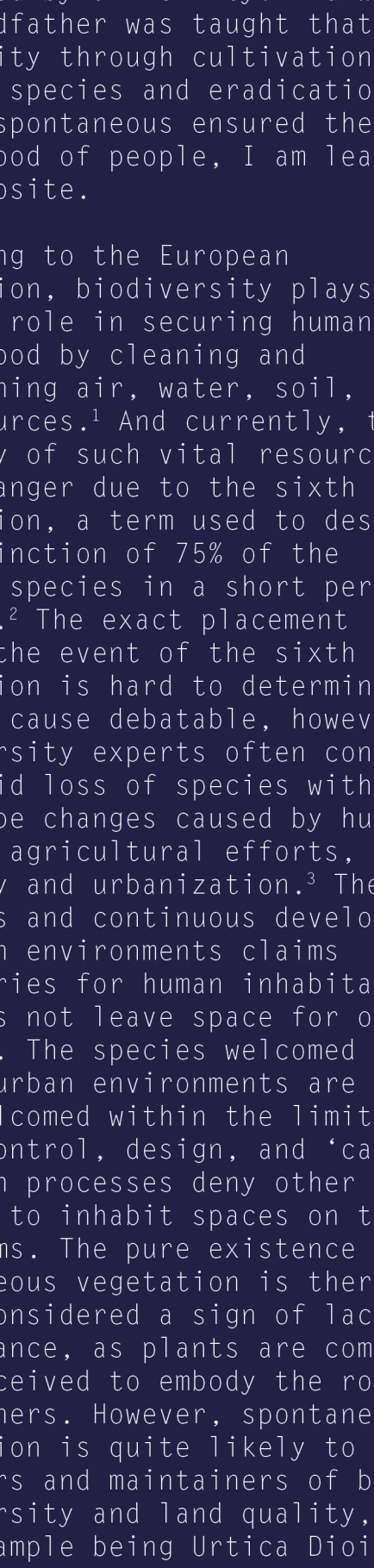
It has come to my understanding that the spontaneous vegetation, or “weeds”, growing in the neighborhood are not appreciated and are requested to be removed. From my understanding, the concern is linked to the perception that spontaneous vegetation is an indicator of neglect and lack of maintenance. And with good reason - this perspective has continuously been presented through the aesthetics of public gardens, ornamental plant cultivations, and regulations of maintenance in public and private spaces. However, I would suggest it is time to challenge this point of view. As life experience might give shape to the individual’s taste, the time in which a life unfolds is therefore also crucial to the development of taste. The taste of my generation is surely inevitably different from that of older or younger generations. Accordingly, the attitude towards spontaneous vegetation.



My grandfather, born and raised in the Danish countryside in 1929, is now an enthusiastic urban gardener and the biggest critic of spontaneous vegetation I know of. His garden presents the greenest grassy lawns and the neatest weeded flower beds to be seen in his neighborhood. In the 1930s, it was custom for countryside children to be sent to serve on a farm in the region, and my grandfather was no exception. From the age of 9 he would spend his Summer days in the fields hand-hoeing “weeds” from crops of Beta vulgaris (beet) or Solanum tuberosum (potato). In the cereal fields, the number of Cirsium (thistle) scratching his body was immense by the time of harvest, as hoeing to remove “weeds” could ruin the cereal crops. His upbringing in the early 1900s agricultural society taught him how the eradication of spontaneous vegetation could increase the common livelihood. Since then, weed management has seen great changes. Just a few decades after my grandfather’s agricultural golden age, the development and use of herbicides boomed. Herbicides were implemented to decrease the need for physical, mechanical work, and saved farmers from many hours of labor. However, the safety of herbicides heaping up in soil was quickly questioned, and therefore gradually limited. Herbicides and other pesticides are still used today in agriculture to create the biggest harvests possible.



As my grandfather grew older, he moved away from fields and into the city, a tendency of urbanization which at this point was rising and still is today. Today, my grandfather does not have to “fight weeds” anymore to make sure he gets food on the table; he can get all he needs at the supermarket. Yet, the practice of hoeing and picking unwanted plants continues in his gardening. When I asked him why there is no spontaneous vegetation in his garden, he told me it is a matter of taste. He does not *like* the look of wilderness in a garden, of plants uncontrollably sneaking in between his organized and well-thought compositions of planted plants. He fears they will take the nutrition away from desired plants, and he dreads the aesthetics of chaotic decay they will contribute to.



My own experience with spontaneous vegetation is nothing like my grandfather’s. And I can’t help but wonder if the years he spent at the fields in his childhood still makes spontaneous vegetation an eyesore to him, overshadowing their potential in urban environments. But growing up in a more developed, and mainly urban landscape might also have provided me with a naive perception of spontaneity. I never had to fight “weeds” to ensure my existence. The places I inhabited so far have mainly been dominated by bricks and asphalt, homogenous grassy lawns, and hedges of Ligustrum vulgare (common privet). In other words, planned landscapes, dominated by uniformity. And while my grandfather was taught that uniformity through cultivation of desired species and eradication of the spontaneous ensured the livelihood of people, I am learning the opposite.

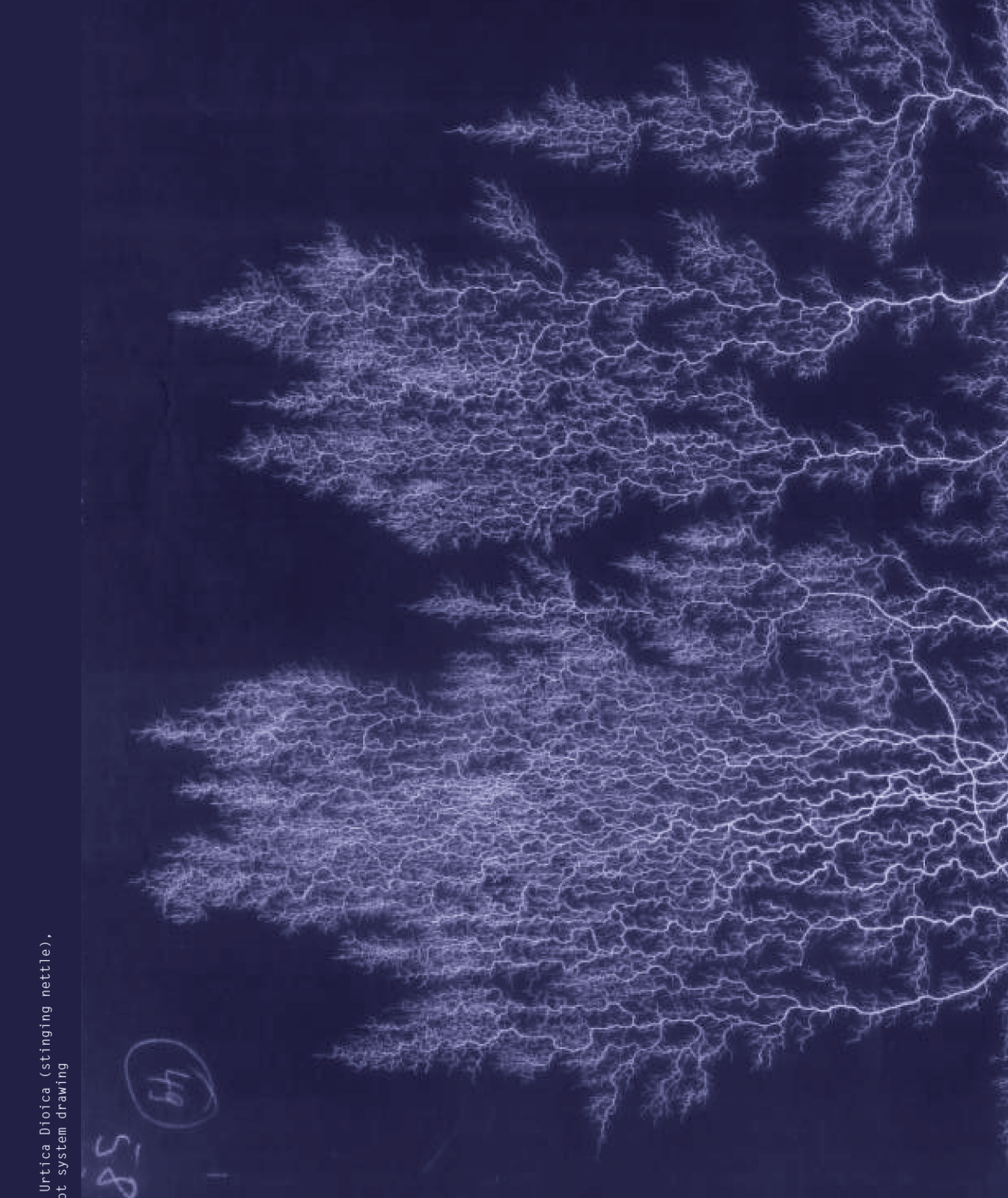
According to the European Commission, biodiversity plays a crucial role in securing human livelihood by cleaning and maintaining air, water, soil, and food sources.<sup>1</sup> And currently, the security of such vital resources is in danger due to the sixth mass extinction, a term used to describe the extinction of 75% of the world’s species in a short period of time.<sup>2</sup> The exact placement within the event of the sixth mass extinction is hard to determine, and the cause debatable, however biodiversity experts often connect the rapid loss of species with landscape changes caused by humans such as agricultural efforts, forestry and urbanization.<sup>3</sup> The previous and continuous development of urban environments claims territories for human inhabitation and does not leave space for other species. The species welcomed within urban environments are often only welcomed within the limits of human control, design, and ‘care’, and such processes deny other species to inhabit spaces on their own terms. The pure existence of spontaneous vegetation is therefore often considered a sign of lack of maintenance, as plants are commonly not perceived to embody the role of maintainers. However, spontaneous vegetation is quite likely to be enhancers and maintainers of both biodiversity and land quality, one such example being Urtica Dioica (stinging nettle).





4. Urtica dioica (stinging nettle), root system drawing

Urtica Dioica is a pioneering species, preparing lands characterized by human disturbance for other plants to grow. The plant often grows on cultivated lands, and gets distributed by the spread of compost, manure or simply by passers-by. It is an indicator of loose surface soils where organic matter has not yet rooted sufficiently. Urtica Dioica is the best neighbor a plant can have; it creates the ideal humus, bettering the soil's ability to hold water, and makes other plants grow more resistant and healthier.<sup>4</sup> It is a breeding place for Coccinellidae (ladybugs), whose larvae balance the population of insects such as the Aleyrodidae (whitefly) and Tetranychus urticae (red spider mite). It is also the main attraction for Aglais urticae (tortoiseshell) and Aglais io (peacock butterfly) caterpillars, who feed on the leaves of Urtica Dioica, thereby keeps the neighboring plants from becoming prey. Even birds gather around the plant in autumn to feed on its seeds, and with good reason - the plant is a superfood, rich in iron, potassium, sodium, and sulfur. Europeans also have a long history with the plant as a source for food,<sup>5</sup> medicine,<sup>6</sup> and textile.<sup>7</sup>



5. Urtica Dioica (stinging nettle), root system drawing

Spontaneous vegetation grows where soils are disturbed, which makes it a natural companion to human presence. Continuous attempts of eradication of “weeds” are therefore unsuccessful, seemingly endless, and lowering the quality and diversity of life. “Weeds” are the result of co-evolution of plants and humans. As Michael Pollan, author and journalist, puts it:

“Weeds, contrary to what the romantics assumed, are not wild. [...] They do better than garden plants for the simple reason that they are better adapted to life in a garden. For where garden plants have been bred for a variety of traits (tastiness, size, esthetic appeal), weeds have evolved with just one end in view: the ability to thrive in ground that man has disturbed. And at this they are very accomplished indeed.”<sup>8</sup>

Due to the urgency to nuance the understanding of green maintenance and embrace the complexities of co-living with plants, I attach to this letter a copy of my thesis, which investigates the systems and relations that create preconceptions towards plants. The thesis unfolds how these preconceptions manifest in urban maintenance regulations, and argues the urgency to readdress the way spontaneous vegetation is perceived and treated in the context of urban environments, given the current ecological crisis.

To embrace and secure biodiverse urban ecosystems within the neighborhood requires revisiting the relationship with spontaneous vegetation. It is time to challenge the attitudes that are at the root of urban green maintenance to reflect upon what maintenance *really* is maintaining. Maintenance might seem to maintain aesthetic standards in urban environments. However, the following thesis finds that what maintenance *really* is maintaining is economic cheap attitudes towards labor, plants and ecosystems within urban environments.

Warmly

Freja Emilie Krømmer Nielsen

Proponent of spontaneous vegetation

## References

- 1 European Commission, ‘Why Do We Need to Protect Biodiversity?’, accessed 9 January 2023, [https://ec.europa.eu/environment/nature/biodiversity/intro/index\\_en.htm](https://ec.europa.eu/environment/nature/biodiversity/intro/index_en.htm).
- 2 Robert H. Cowie, Philippe Bouchet, and Benoît Fontaine, ‘The Sixth Mass Extinction: Fact, Fiction or Speculation?’, Biological Reviews 97, no. 2 (2022): 640–63, <https://doi.org/10.1111/brv.12816>.
- 3 ‘Sixth Mass Extinction Could Destroy Life as We Know It- Biodiversity Expert | Research and Innovation’, accessed 7 February 2023, <https://ec.europa.eu/research-and-innovation/en/horizon-magazine/sixth-mass-extinction-could-destroy-life-we-know-it-biodiversity-expert>.
- 4 Studies of tomatoes have shown that tomatoes are less likely to rot and decay slower after harvest, if they grow next to Urtica Dioica: Ehrenfried E. Pfeiffer, Weeds and What They Tell Us, Third edition (Edinburgh: Floris Books, 2012), 93.
- 5 Urtica Dioica was considered an “emergency food species” and used as an alternative food source due to the famine during World War II: Tom Vorstenbosch et al., ‘Famine Food of Vegetal Origin Consumed in the Netherlands during World War II’, Journal of Ethnobiology and Ethnomedicine 13 (17 November 2017): 63, <https://doi.org/10.1186/s13002-017-0190-7>.
- 6 Urtica Dioica has been used to treat multiple different inflammatory disorders by Native Americans and Europeans: Mueen Ahmed KK and Subramani Parsuraman, ‘Urtica Dioica L., (Urticaceae): A Stinging Nettle’, Systematic Reviews in Pharmacy 5, no. 1 (8 January 2016): 6–8, <https://doi.org/10.5530/srp.2014.1.3>.
- 7 Dating back to the Bronze Age, Urtica Dioica was used as a fiber to create textiles: C. Bergfjord et al., ‘Nettle as a Distinct Bronze Age Textile Plant’, Scientific Reports 2, no. 1 (28 September 2012): 664, <https://doi.org/10.1038/srep00664>.
- 8 Michael Pollan, ‘Weeds Are Us’, The New York Times Magazine, 5 November 1989, <https://michaelpollan.com/articles-archive/weeds-are-us/>.

## Illustrations

- 1 <https://images.wur.nl/digital/collection/coll113/id/1052/rec/4https://images.wur.nl/digital/api/singleitem/image/coll113/1052/default.jpg?highlightTerms=BETA>
- 2 <https://images.wur.nl/digital/collection/coll113/id/1016/rec/1https://images.wur.nl/digital/api/singleitem/image/coll113/1016/default.jpg?highlightTerms=solanum>
- 3 <https://images.wur.nl/digital/collection/coll113/id/696/rec/1https://images.wur.nl/digital/api/singleitem/image/coll113/696/default.jpg?highlightTerms=cirsium>
- 4 <https://images.wur.nl/digital/collection/coll113/id/635/rec/2https://images.wur.nl/digital/api/singleitem/image/coll113/635/default.jpg?highlightTerms=urtica%20dioica>
- 5 <https://images.wur.nl/digital/collection/coll113/id/635/rec/2https://images.wur.nl/digital/api/singleitem/image/coll113/635/default.jpg?highlightTerms=urtica%20dioica>



## Introducing ‘The Good Deal’

The normative understanding of cheap is about obtaining something at a very low price. This entails that the actual value of the product does not match its price; that it is a “good deal”. However, not paying the full price means someone else needs to pay, sooner or later.

The ‘good deal’ has managed to advertise the reckless use of natural resources, destruction of historical landscapes and extractive labor relations under an optimistic slogan. This might have seemed convincing for a while, but as more species become extinct and humans get diagnosed with eco-anxiety, the illusion falls apart. Like Patel and Moore put it: “[...] there’s nothing like an ecological crisis to remind civilization that nature is never cheap.”<sup>1</sup>

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1 Raj Patel and Jason W. Moore, *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet* (University of California Press, 2017), 69, <https://doi.org/10.1525/9780520966376>.



This thesis questions cheap as an economic strategy, and argues that cheapness is not only monetary, but relational: capitalism has created a devaluation of and separated relationship between plants and humans. The investigation draws on Raj Patel and Jason W. Moore's framework of Cheap, as a set of strategies to objectify and exploit ecologies, as well as Anna L. Tsing's notion of scalability and its importance in understanding nature within capitalism. On this basis, the thesis argues that Cheap societies developed binary evaluation methods that objectify and categorize people and plants as desirable or undesirable. Such categorizations are deeply implemented in the framework of urban maintenance services and sustain the conception of human and nature as separate and independent. Recreating such concepts in urban maintenance practices results in a degradation rather than preservation of the quality of life for humans and plants alike.



## **Systems of Cheap Relations**



According to Raj Patel and Jason W. Moore, Cheap<sup>2</sup> is a set of strategies to manage relations between capitalism and ecosystems of living and non-living beings. Cheapening strategies include claiming territory, and all the entities inhabiting it (human and more-than-human) and mobilizing these entities into circuits of production and consumption, with as little compensation as possible.<sup>3</sup> Such strategies are seen in industries of deforestation, peat extraction or monocultural farming, where plants are systematized into profit at the cost of the ecologies, they take part in. According to Patel and Moore, the facilitation of such Cheap relations was enabled by the narrative of separation between “Society” and “Nature”.

In the rise of capitalism, “Society” was thought to be “civilized” humans, separate and independent from the ecosystems, and often wealthy and powerful. And “Nature”, on the other hand, were considered to be a resource to extract from, a group of both humans and other species, as well as natural bodies such as waters and soils.<sup>4</sup> The strategy of objectifying and diminishing Nature

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2            The terms Cheap, Society and Nature are written in uppercase throughout the thesis to underline their definition according to Patel and Moore’s framework of Cheap described in this thesis’ chapter “Cheap Relations”; Patel and Moore, *A History of the World in Seven Cheap Things*..

3            Patel and Moore, 32.

4            Patel and Moore, 34-35.



to a bare resource enabled Society to alienate bodies within the same ecosystem and narrate extractive actions to be with no consequence. This transformed the human relationship to nature. Mapping, quantifying, and categorizing Nature became a “social good” that made it possible to control and dominate for the sake of profit.<sup>5</sup> Knowledge that intertwined human and nature became a threat to the capitalist conception of separation and was therefore ridiculed or eradicated. And sharing and producing knowledge of relations between nature and the world was strictly the privilege of European men, who belonged to the group that Patel and Moore refer to as Society.<sup>6</sup> This resulted in the Cheapening of not only Nature, but also people with the belief that species are connected and depend on each other.

To support the capitalist promise of endless advancement and development, people were mobilized in extractive labor forms based on Cheap strategies. In the Netherlands, labor has been given shape by the implementation of such strategies since the 19<sup>th</sup> century, In the posterity of the Napoleonic Wars, the United Kingdom of the Netherlands<sup>7</sup> was

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5            Patel and Moore, 63.

6            Patel and Moore, 69.

7            The United Kingdom of the Netherlands was the predecessor of what is now the Netherlands and Belgium.



impoverished. This led to the establishment of the Society of Benevolence in 1815, where money of the rich was invested in land for the poor to develop. People, not in the top of Society, were forced to take part in extractive labor forms, many due to poverty, in fear of criminalization or simply against their will. Contributions from the government supported the configuration of “free colonies”, where poor people came “voluntarily”,<sup>8</sup> and “unfree colonies”, where orphans and criminals got sent away from the expanding cities. These people were to build up the lands themselves and take part in extractive landscaping practices such as monocultural farming and peat cutting, practices that have shown to deplete soils and lower the land below sea level, increasing chances of flooding.

In the colonies of Benevolence, such actions were sold as an effort to develop and evolve both people and land for the better, while in fact, what was better was decided by the creators of the Society of Benevolence, the people with wealth and power. Anna Tsing refers to this as the “pulse of progress”,<sup>9</sup> the promise of empowerment

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8 Considering that begging and vagrancy were made illegal and nearly one third of the country lived by charity,, free will was not really an option. Koloniën van Weldadigheid, ‘Landloperkolonies Tijdslijn’, accessed 27 February 2023, <https://www.kolonienvanweldadigheid.eu/tijdslijn/>.

9 Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton: Princeton University

to ordinary people by exchanging their labor within the capitalistic model for money and things. People are promised betterment by devoting their bodies to the objectification and mobilization that Cheap labor offers. And ordinary people did indeed get more money and things, but who truly benefited from this scheme were the ones at the top of Society.

Tsing further explains how the mindset of endless expansion was enabled through scalability; a strategy to unify bodies translate them into assets to be scaled and adjusted through human control.<sup>10</sup> This made it possible to control who or what needed to be scaled to keep on expanding the profit and lowering prices. In the colonies of Benevolence, the residents were people considered to be a social burden, and national laws such as the vagrancy law made it possible to scale this group of people. Furthermore, unification was made by isolation, monitoring and exchanging new residents' personal clothes with colony garments.<sup>11</sup>

The notions of Cheap strategies and scalability unpack how Society value entities by their ability to take part in capitalistic production

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Press, 2015), 132.

10 Tsing, 132.

11 Koloniën van Weldadigheid, 'Landloperkolonies Tijdslijn', accessed 27 February 2023.

and consumption schemes. Furthermore, these notions indicate that two categories of desires emerged: the desirable and undesirable. What was desirable and profitable was scaled up, and what was undesirable and a disturbance to the “endless” expansion and profit was scaled down. These narratives that emerged in the rise of capitalism are still distributed through maintenance practices and applied to people and plants today.

## **Desirable and Undesirable Destinies**



The desirable can be described as a valuable entity due to its scalability and ability to take part in lines of production and consumption. The desirable is an affirmation to the capitalistic society, supporting the methodologies and strategies, such as plant propagation in nurseries or synthetic seed development in laboratories, which narrate human control, growth and development. The undesirable on the other hand, is an entity challenging these Cheap relations due to its unwillingness or inability to be under human control and thereby take part in the Cheap strategies. The desirable and undesirable are especially narrated in plant cultivation industries such as farming practices, where only the planted plant is desired and the spontaneous is considered a “weed”, but has also disseminated into residential environments such as domestic gardens and street maintenance.

One outstanding example of scalability in the history of the Netherlands is that of Tulipa (tulip). Tulipa originally grew in an area stretching from Southern Europe to Central Asia, native to mountain areas with temperate climates. Tulipa had to travel from the Ottoman empire to Vienna before the first bulb was introduced in Leiden in 1549. This new flower quickly gained a huge popularity and initiated a 3-year long period of Tulip Mania from 1634. At one point, the price of a single bulb would be more than 10 times the

average worker's yearly salary. This period was the beginning of a long tradition for cultivating tulips within the Netherlands. Today the Dutch produce extreme amounts of tulips, with 90 percent of the world's tulips being cultivated in the Netherlands,<sup>12</sup> which makes tulips cheap and easy to obtain in Dutch markets and stores.

## Tulipa

a. pressed leaves and flowers

The ability to adapt to human beauty standards is not the only crucial strategy for a plant

12 Muhammed Muheisen, 'Dutch Tulip Farmers Are Hoping for a Post-Pandemic Boom', *Travel*, 13 May 2021, <https://www.nationalgeographic.com/travel/article/for-dutch-tulip-farms-a-season-of-rebirth>.

13 Michael Pollan, *The Botany of Desire: A Plant's-Eye View of the World*, Paperback ed, Random House Trade Paperbacks (New York, NY: Random House, 2002), 78–79.

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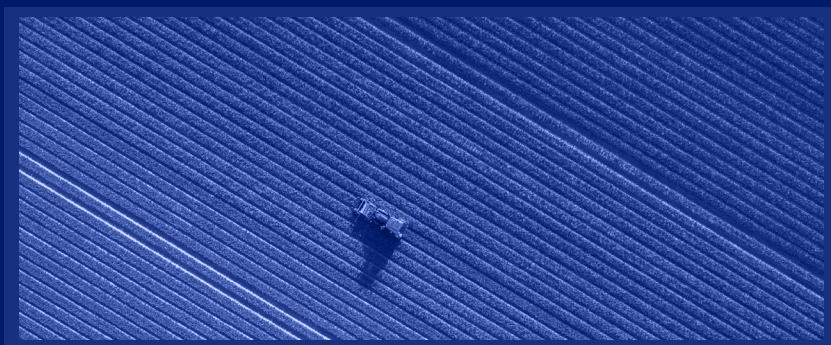


b. Tulipa dasystemon growing spontaneously in the Tien Shan mountains of Kyrgyzstan

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c. Fields of cultivated  
Tulipa in the Netherlands

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12 Muhammed Muheisen, 'Dutch Tulip Farmers Are Hoping for a Post-Pandemic Boom', *Travel*, 13 May 2021, <https://www.nationalgeographic.com/travel/article/for-dutch-tulip-farms-a-season-of-rebirth>.

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d. roots of Tulipa

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In this sense, being desirable can enhance or even secure chances of survival. Michael Pollan acknowledges the importance of desire, and explains, how the succession of *Tulipa* has depended on its' ability to adapt to human beauty standards over time: "Of course, their willingness to take part in the moving game on human culture has proven a brilliant strategy for their success, for there are a lot more roses and tulips around today, in a lot more places, than there were before people took an interest in them. For a flower the path to world domination passes through humanity's ever-shifting ideals of beauty."<sup>13</sup>

The ability to adapt to human beauty standards is not the only crucial strategy for a plant

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12 Muhammed Muheisen, 'Dutch Tulip Farmers Are Hoping for a Post-Pandemic Boom', *Travel*, 13 May 2021, <https://www.nationalgeographic.com/travel/article/for-dutch-tulip-farms-a-season-of-rebirth>.

13 Michael Pollan, *The Botany of Desire: A Plant's-Eye View of the World*, Paperback ed, Random House Trade Paperbacks (New York, NY: Random House, 2002), 78–79.

to uphold its status as desirable, also the willingness to take part in Cheap systems has a great impact. Refusing to do so can create a swift change from hero to villain, from desirable to undesirable. However, this transformation does not necessarily eliminate the possibility of world domination. At least not in the case of *Fallopia japonica*, commonly known as the Japanese Knotweed.

In 1850 German physician Philip Franz von Siebold returned to Leiden after spending many years abroad in the Dutch colonies, recruited by the Netherlands. On his journey he came to stay on the Japanese island Dejima, an island where the Dutch managed to dominate the trades between Europe and Japan. In his time there, he created a big collection of plants and animals that he would later bring back to Leiden; one of them being *Fallopia japonica*. Already at this time, strategies of Cheap were thriving, and Siebold saw the possibility of turning the “exotic” ornamental qualities of the *Fallopia japonica* into profit. Cultivation efforts in plant nurseries created a lot of profit and distributed the plant both to the private and public gardens. However, by the early 1900s it became clear that the *Fallopia japonica* had another agenda, and it escaped the gardens to start growing spontaneously in areas with unbalanced or young ecosystems.

The public perception of the plant drastically turned from capitalistic optimism to invasive dread in less than 100 years with the realization of the plant's uncontrollability. In 1920's East

*Fallopia Japonica*

a. pressed leaves and flowers



Mediamatic, accessed 21 November 2022, <http://www.mediamatic.net/en/page/380988/how-japanese-knotweed-came-to-europe>.

16 Wageningen University & Research WUR, 'Japanese Knotweed - How to Control and Remove It', Contact Form, WUR, 26 September 2019, <https://www.wur.nl/en/article/japanese-knotweed-how-to-control-and-remove-it.htm>.

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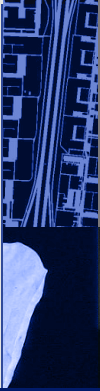


b. spontaneous growth of  
*Fallopia japonica* near  
volcano in Japan

However, by the early 1960s it became clear that the *Fallopia japonica* had another agenda, and it escaped the gardens to start growing spontaneously in areas with unbalanced or young ecosystems.



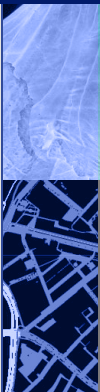
The public perception of the plant drastically turned from capitalistic optimism to invasive dread in less than 100 years with the realization of the plant's uncontrollability. In 1920's East



c. spontaneous growth of  
*Fallopia japonica* near rail  
road in Germany

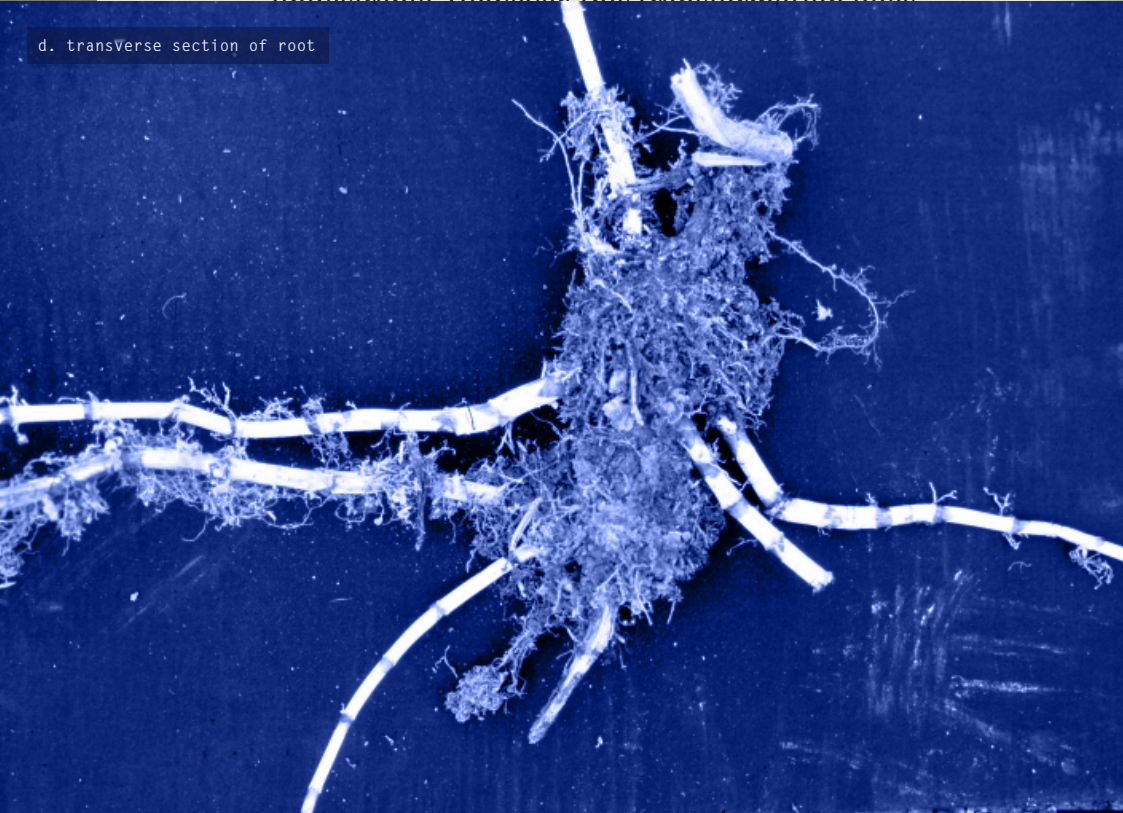
Mediamatic, accessed 21 November 2022, <http://www.mediamatic.net/en/page/380988/how-japanese-knotweed-came-to-europe>.

16 Wageningen University & Research WUR, 'Japanese Knotweed - How to Control and Remove It', Contact Form, WUR, 26 September 2019, <https://www.wur.nl/en/article/japanese-knotweed-how-to-control-and-remove-it.htm>.



to uphold its status as desirable, also the willingness to take part in Cheap systems has a great impact. Refusing to do so can create a swift change from hero to villain, from desirable to undesirable. However, this transformation does

d. transVerse section of root



However, by the early 1960s it became clear that the Fallopia japonica had another agenda, and it escaped the gardens to start growing spontaneously in areas with unbalanced or young ecosystems.



The public perception of the plant drastically turned from capitalistic optimism to invasive dread in less than 100 years with the realization of the plant's uncontrollability. In 1930's East Cornwall in the United Kingdom, the price of a property where *Fallopia japonica* was detected dropped by £100,<sup>14</sup> and today such a property is almost impossible to sell.<sup>15</sup> The Dutch, fearing the same destiny in the Netherlands, have done extensive experiments of thermal, chemical, and mechanical methodologies to prevent the plant from spreading.<sup>16</sup> These attempts constitute a perpetual battle as the distribution of *Fallopia japonica* mainly occurs through human landscape disturbances such as soil relocation from railroad development or construction building due to further urbanization. But human efforts to eradicate *Fallopia japonica* have not yet come to an end. The latest attempt in the Netherlands has been to introduce the native predator of *Fallopia japonica*, releasing 5,000 specimens of *Aphalari*

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14 The value of £100 from 1930 to 2022 is around 75 times higher J.P. Bailey and A.P. Conolly, 'Prize-Winners to Pariahs: A History of Japanese Knotweed s.l. (Polygonaceae) in the British Isles', *Watsonia* 23 (2000): 93–110.

15 Hyunsuh Kim, 'How Japanese Knotweed Came to Europe', Mediamatic, accessed 21 November 2022, <http://www.mediamatic.net/en/page/380988/how-japanese-knotweed-came-to-europe>.

16 Wageningen University & Research WUR, 'Japanese Knotweed - How to Control and Remove It', Contact Form, WUR, 26 September 2019, <https://www.wur.nl/en/article/japanese-knotweed-how-to-control-and-remove-it.htm>.

itadori (Japanese leaf flea) in three locations in Amsterdam. Only time can tell how this will affect the Dutch ecosystems.<sup>17</sup>

The histories of *Tulipa* and *Fallopia japonica* exemplify the connection between control and desire in the human relationship to plants. Both are plants, who dominate landscapes in the Netherlands, yet villainization only follows the one, that cannot be controlled, the undesirable. This system of upscaling plants, with the promise of expanding profit, and downscaling plants considered a threat to profit, is to Cheapen Nature.

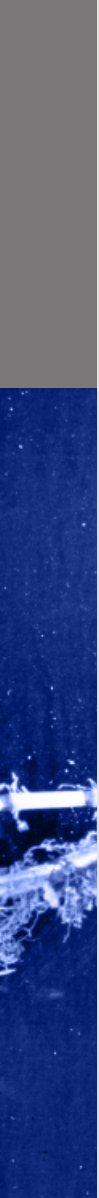
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17 In the 1930s, *Rhinella marina* (cane toad) was introduced from South America to Australia as a pest control in the sugar cane fields, where the beetle *Dermolepida albobirtum* (cane beetle) ate the harvest. This succeeded, but because *Rhinella marina* proved to be even more tolerant in new living conditions and way faster than the native toads, it started to consume other toad species too. In other words, the introduction of non-native species can result in a change of the conditions for competition. Some toads got outcompeted, and some became more resilient and adapted to these new conditions. This is what we normally refer to as Darwin's "survival of the fittest".

Johan Olsen and Vicky Knudsen, 'Ændrer naturen sig nu i lyntempo?', Vildt Naturligt DR.DK, accessed 16 January 2023, <https://www.dr.dk/lyd/p1/vildt-naturligt/vildt-naturligt-2023-01-16>.

## **The Maintenance Defect**





The notion of the desirable and undesirable plant manifests in gardening practices. In public and private gardens, desirable plants, such as Tulipa, are often welcomed, and undesirable plants, like Fallopia japonica, are often considered “weeds”.

Spontaneous vegetation is often perceived as undesirable due to its uncontrollable nature, and is still fought against today despite the marginal space left to wilderness.<sup>18</sup> Urbanization has, amongst other human activities, diminished wild growing spaces of other species, which creates a battle for resources between humans and such species.<sup>19</sup> However, decreasing the existence of others does not increase human chances of survival, as the existence of a diverse set of species is necessary to secure sources of healthy food, water, and air.

Spontaneous vegetation represents what still grows *despite* human efforts of domination and natural landscape destruction. Assemblages of uncultivated plants which thrive in interfered landscapes, such as urban environments, create

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18 A map to show Earth's remaining wilderness showcases that today, more than 77% of land (excluding Antarctica) has been modified by human activities.

James E. M. Watson et al., 'Protect the Last of the Wild', *Nature* 563, no. 7729 (November 2018): 27–30, <https://doi.org/10.1038/d41586-018-07183-6>.

19 'What Is Mass Extinction and Are We Facing a Sixth One?', accessed 13 February 2023, <https://www.nhm.ac.uk/discover/what-is-mass-extinction-and-are-we-facing-a-sixth-one.html>.

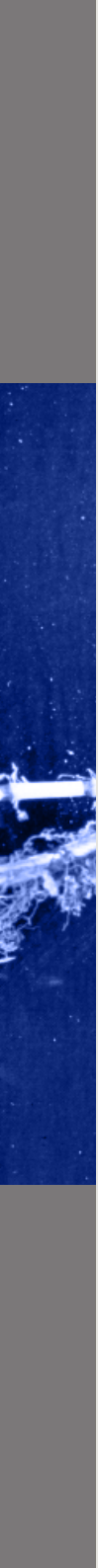
novel ecosystems. Scholar Carlos Gray Santana explains that novel ecosystems are: “those ecosystems which can’t be neatly classified as either wild or anthropogenic, because they are the product of both human and non-human activity to a significant degree.”<sup>20</sup> Due to continuous urban developments, landscapes of novel character have been and are still increasing. This interferes with old ecosystems and naturally results in an increase of novel ecosystems. However, acknowledgement of novel ecologies from the field of conservation and maintenance is rare despite the common nature of such ecologies. According to Santana, conservationists critique the ethicality of acknowledging novel ecosystems as valuable, due to the fear of this acceptance creating a “license to trash nature”, which would further destroy historical ecologies, ones created without human initiative.<sup>21</sup> However, if historical ecologies no longer have space to unfold due to human activity, and novel ones are not allowed due to the same, then there is simply no space for spontaneous growth anymore.

If novel ecosystems are the only option for wild growth in urban environments, now and in the future, how come practices of urban

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20 Carlos Gray Santana, ‘The Value of and in Novel Ecosystem(s)’, *Biology & Philosophy* 37, no. 2 (April 2022): 3, <https://doi.org/10.1007/s10539-022-09833-6>.

21 Santana, 4.



green maintenance do not embrace these? And what are the consequences of not developing maintenance practices concurrently with the development of novel ecosystems?

Maintenance means, in the sense of the word, the process of preservation of a condition or situation. “Green” maintenance must thereby be the practice of preserving vegetation – but which?

Current maintenance regulations regard the preservation of cultivated plants only and intend to better these by removing spontaneous ones. However, this is not necessarily beneficial for the cultivated plant.

In an interview to the New York Times, rosarian Peter E. Kukielski explains that a modern rose garden is “not a monoculture, but a mixed border”,<sup>22</sup> and strategically includes “companion plants”, such as *Tanacetum vulgare* (tansy), which normally grows spontaneously and often is considered a “weed”. Companion planting is the making of a polyculture of plants that complement each other’s growth and is commonly used in both farming and gardening practices to attract and direct specific insects,

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<sup>22</sup> Margaret Roach, ‘The Smart Way to Grow Roses’, *The New York Times*, 17 February 2021, sec. Real Estate, <https://www.nytimes.com/2021/02/17/realestate/the-smart-way-to-grow-roses.html>.

secure good shading and wind conditions, and release or fixate specific chemicals from the roots or leaves of the plants. This helps plants to secure and make beneficial growing habitats for each other. Gardening or maintenance that preserve cultivated plants by the removal of others might therefore not only be unbeneficial for the cultivated plant but can be directly counterproductive to its preservation. This results in a process, where preservative actions actually attack the ecosystem, they intend to defend. In other words, it results in an autoimmune mechanism.

The biological understanding of autoimmunity is the event of the body's immune system attacking its own body components. On a microscopic level, blood cells misread the organism's own cells with foreign cells, and thereby end up attacking the organism itself. This weakens the common health and well-being of the organism, while intending to strengthen it.

However, autoimmunity does not only address molecular biological processes but can also refer to other fields. For example, philosopher Jacques Derrida brought the term to a political context by showcasing the connection between terrorism conducted in America and American foreign policy and weapon trade.<sup>23</sup> Derrida

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Derrida argues that the terror event of September 11, 2001 was a

connects America's attempt to protect its self-image as a global superpower as the cause of the autoimmune response – the fear of America dissolving leads to actions that in the end disrupt the American body itself. While biologists and philosophers connect the reason for a system to have an autoimmune response with the fear of dissolution of the system itself, green maintenance and ecosystem preservation seem to be driven by such fears.

Looking towards the Caribbean, more specifically the agricultural wastelands of Puerto Rico, forests are dominated by *Spathodea campanulata* (African Tulip tree). Some might say *Spathodea Campanulata* is not only a tree, but a relic of the islands' past introduction of non-native plants for ornamental production purposes. Despite conservationists' skepticism of introduced species' role in biodiversity, *Spathodea campanulata* has proved to be a savior of the native species which got erased in the rise of the sugar industry. Forests of *Spathodea campanulata*

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result of American military efforts, and thereby an autoimmune process: "For let us not forget that the United States had in effect paved the way for and consolidated the forces of the "adversary" by training people like "bin Laden," who would here be the most striking example, and by first of all creating the politico-military circumstances that would favor their emergence and their shifts in allegiance".

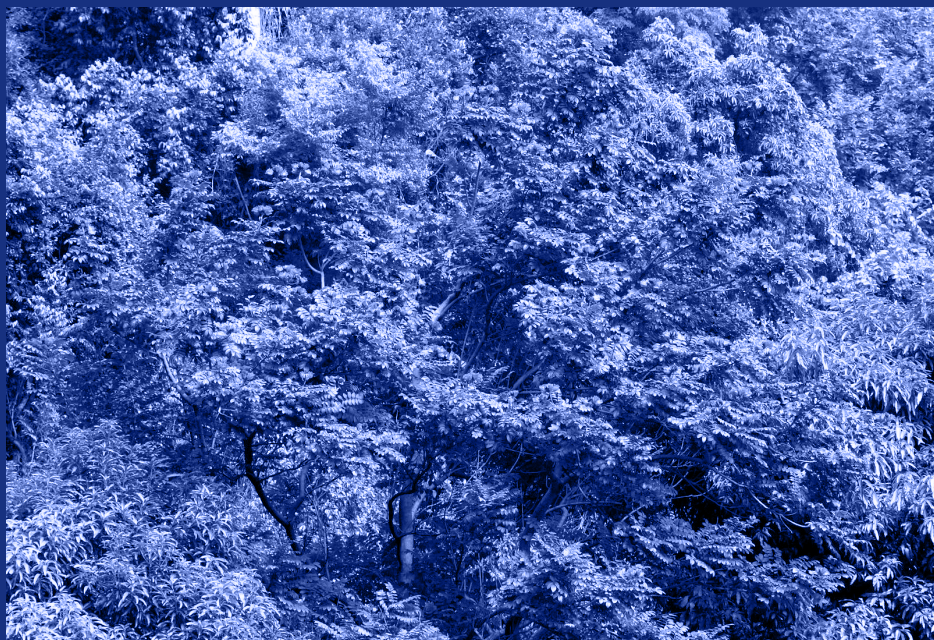
Giovanna Borradori, Jürgen Habermas, and Jacques Derrida, *Philosophy in a Time of Terror: Dialogues with Jürgen Habermas and Jacques Derrida*, Nachdr. (Chicago: Univ. of Chicago Press, 2009), 95.



*Spathodea Campanulata*

a. pressed leaves and flowers





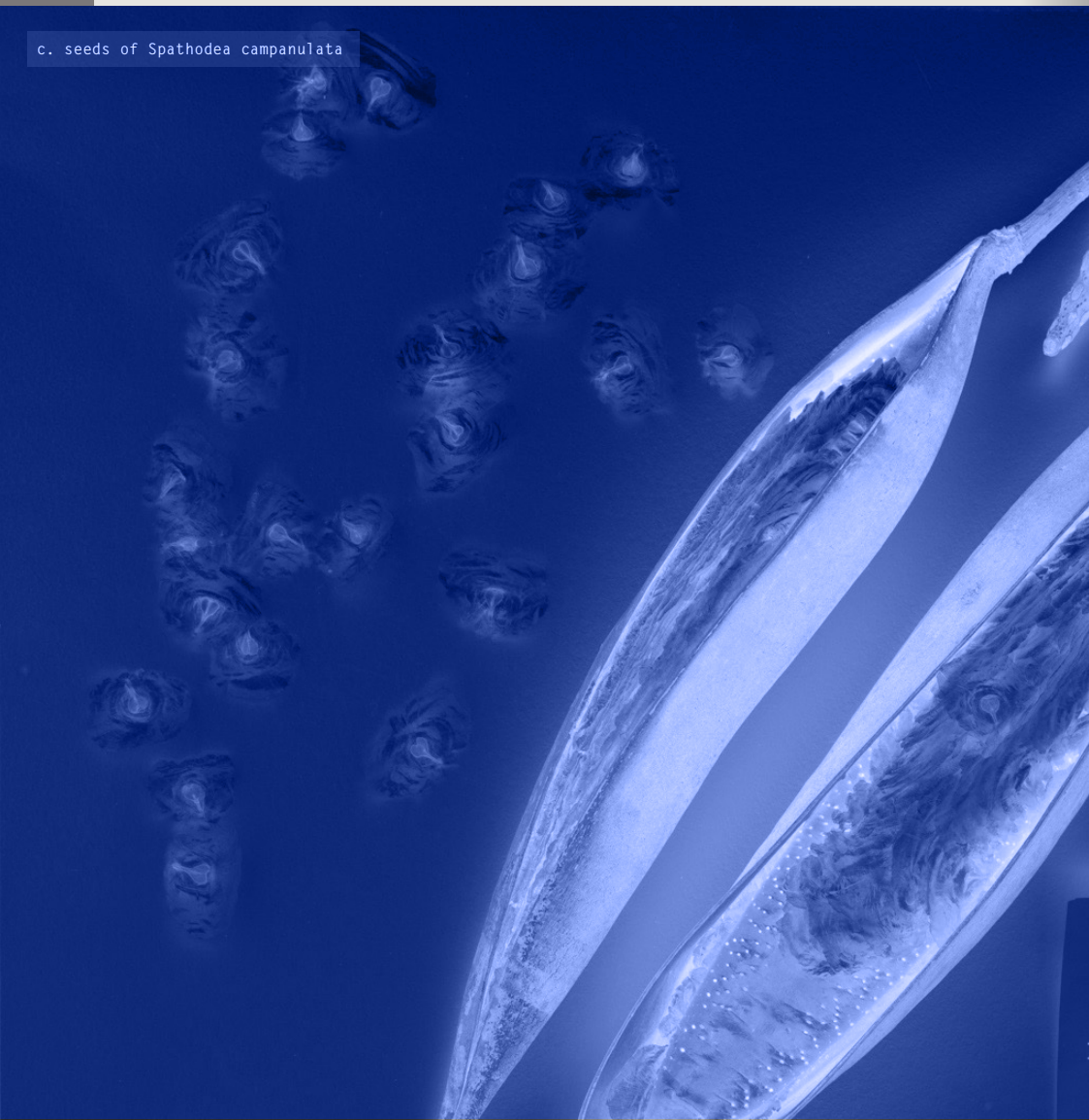
b. *Spathodea campanulata*  
growing spontaneously in Sri  
Lanka, where it is considered  
as invasive



c. Cultivation of *Spathodea campanulata* in a plant nursery in the Guangdong province in China



c. seeds of *Spathodea campanulata*



host 80% animals of native origin and have reintroduced 7 native bird species that were lost during the expansion times of the sugar plantations.<sup>24</sup> Considering that the growth of native species was limited to around 6% in the 1940s by Spanish and American colonists, such efforts are quite impressive.<sup>25</sup> However, plants with ability of rapid growth in depleted soil are not commonly perceived as valuable.

*Spathodea campanulate* managed to put a stop to further loss of native species, it has helped to rebalance depleted soils from the former plantation cultivations and hosts a variety of birds, reptiles, and insects, native and not.<sup>26</sup> It gives reason to question maintenance practices that aim to eliminate introduced species. Removing *Spathodea campanulata* would yet again remove the habitat and endanger local species, that got exposed during the Cheap process of rapidly expanding sugar cultivation. To announce *Spathodea Campanulata* as the antagonist of native or historical ecosystems is to ignore the disruptive processes that deforestation, monocultural farming and soil extraction did to the historical ecosystems in

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24 Pearce, 221.

25 Fred Pearce, *The New Wild: Why Invasive Species Will Be Nature's Salvation* (Boston: Beacon Press, 2015), 219.

26 Pearce, 220.



Puerto Rico during the sugar cultivation.

*Spathodea Campanulata* exemplifies an autoimmune mechanism that intends to eradicate introduced species for the preservation of native ones. Likely, in an urban context, it is an autoimmunity to eradicate novel ecosystems in urban areas to preserve historical ones, as the reason for historical ecosystems to be endangered in the first place is human construction and cultivation.

Urban green maintenance constitutes an autoimmune mechanism, as its' key practice of preserving vegetation is the eradication of spontaneously growing plants, native or not, which results in more harm than benefit for the bigger body of urban vegetation.

Could the example of *Spathodea Campanulata* give insights into other ways of evaluating spontaneous, "undesirable" plants which grow in urban Dutch environments, where ecosystems continuously are re-constructed due to urban expansion and re-developments? And if current maintenance practices do not preserve urban vegetation and ecosystems, what are they really maintaining then? And how do they do so?

## **Dutch Strategies of Cheap Maintenance**





# CROW REGULATIONS APPLIED IN MAINTENANCE OF PAVED PUBLIC SPACES

## CATEGORIES APPLIED IN EINDHOVEN

	A	B		
Groen-beplanting	bloembak-bloei			
A+	A	B	C	D
				
De beplanting ver- toont een zeer goede bloei.	De beplanting ver- toont een goede bloei.	De beplanting ver- toont voldoende bloei.	De beplanting ver- toont matige bloei.	De beplanting ver- toont slechte bloei.
bloei zeer goed	bloei goed	bloei voldoende	bloei matig	bloei slecht
uitgebloeide bloemen 0% per bloembak	uitgebloeide bloemen ≤ 15% per bloembak	uitgebloeide bloemen ≤ 25% per bloembak	uitgebloeide bloemen ≤ 40% per bloembak	uitgebloeide bloemen > 40% per bloembak
Groen-beplanting	bodembedekkers-overgroei randen verharding of gras			
A+	A	B	C	D
				
De rand van de verhar- ding of het gras is vol- ledig zichtbaar.	De rand van de verhar- ding of het gras is goed zichtbaar.	De rand van de verhar- ding of het gras is redelijk zichtbaar.	De rand van de verhar- ding of het gras is nauwelijks zichtbaar.	De rand van de verhar- ding of het gras is niet zichtbaar.
gemiddelde lengte overgroeiende beplanting 0 cm per 100 m <sup>2</sup>	gemiddelde lengte overgroeiende beplanting ≤ 5 cm per 100 m <sup>2</sup>	gemiddelde lengte overgroeiende beplanting ≤ 15 cm per 100 m <sup>2</sup>	gemiddelde lengte overgroeiende beplanting ≤ 25 cm per 100 m <sup>2</sup>	gemiddelde lengte overgroeiende beplanting > 25 cm per 100 m <sup>2</sup>
lengte overgroeiende beplanting 0 cm	lengte overgroeiende beplanting ≤ 30 cm	lengte overgroeiende beplanting ≤ 30 cm	lengte overgroeiende beplanting ≤ 45 cm	lengte overgroeiende beplanting > 45 cm
Groen-boom	boomspiegel-onkruid			
A+	A	B	C	D
				
Er is geen onkruid.	Er is weinig onkruid.	Er is in beperkte mate onkruid.	Er is redelijk veel onkruid.	Er is veel onkruid.
bedekking 0% per boomspie- gel	bedekking ≤ 20% per boomspie- gel	bedekking ≤ 30% per boomspie- gel	bedekking ≤ 40% per boomspie- gel	bedekking > 40% per boomspie- gel
bedekking door res- ten 0% per boomspie- gel	bedekking door res- ten ≤ 20% per boomspie- gel	bedekking door res- ten ≤ 30% per boomspie- gel	bedekking door res- ten ≤ 40% per boomspie- gel	bedekking door res- ten > 40% per boomspie- gel
aantal stuks onkruid hoger dan 20 cm 0 stuks per boomspie- gel	aantal stuks onkruid hoger dan 20 cm ≤ 1 stuk per boomspie- gel	aantal stuks onkruid hoger dan 20 cm ≤ 3 stuks per boom- spiegel	aantal stuks onkruid hoger dan 20 cm ≤ 5 stuks per boom- spiegel	aantal stuks onkruid hoger dan 20 cm > 5 stuks per boom- spiegel

“Bloom of flower box”

Planted vegetation which does  
not bloom is undesirable

“Ground cover overgrows  
edges of pavement or  
grass”

Plants exceeding advised  
boundaries are undesirable

INTERPRETATION OF CROW EVALUATION

“Weeds within edging  
for tree”


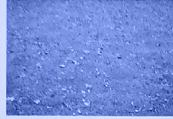

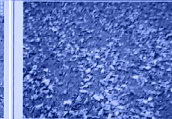
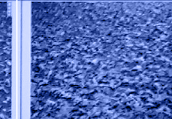






Unplanted plants are  
undesirable

EINDHOVEN, THE NETHERLANDS



# CROW REGULATIONS APPLIED IN MAINTENANCE OF GREEN PUBLIC SPACES

CATEGORIES APPLIED IN EINDHOVEN

A					B					C				
Groen-gras en kruidachtigen					natuurlijk afval									
A+	A	B	C	D										
														
Er ligt geen natuurlijk afval.	Er ligt weinig natuur-lijk afval.	Er ligt in beperkte mate natuurlijk afval.	Er ligt redelijk veel natuurlijk afval.	Er ligt veel natuurlijk afval.										
bedekking binnen bladafvalperiode 0% per 100 m²	bedekking binnen bladafvalperiode ≤ 10% per 100 m²	bedekking binnen bladafvalperiode ≤ 25% per 100 m²	bedekking binnen bladafvalperiode ≤ 35% per 100 m²	bedekking binnen bladafvalperiode > 35% per 100 m²										
bedekking buiten bladafvalperiode 0% per 100 m²	bedekking buiten bladafvalperiode ≤ 5% per 100 m²	bedekking buiten bladafvalperiode ≤ 10% per 100 m²	bedekking buiten bladafvalperiode ≤ 25% per 100 m²	bedekking buiten bladafvalperiode > 25% per 100 m²										
laagdikte 0 cm	laagdikte ≤ 3 cm	laagdikte ≤ 10 cm	laagdikte ≤ 30 cm	laagdikte > 30 cm										
Meetinstructies: Natuurlijk afval														
Verharding					open verharding-ongebonden verharding-onkruid									
A+	A	B	C	D										
														
Er is geen onkruid.	Er is weinig onkruid.	Er is in beperkte mate onkruid.	Er is redelijk veel onkruid.	Er is veel onkruid.										
bedekking 0% per 100 m²	bedekking ≤ 5% per 100 m²	bedekking ≤ 20 per 100 m²	bedekking ≤ 35% per 100 m²	bedekking > 35% per 100 m²										
aantal stuks onkruid hoger dan 20 cm 0 stuks	aantal stuks onkruid hoger dan 20 cm ≤ 10 stuks per 100 m²	aantal stuks onkruid hoger dan 20 cm ≤ 20 stuks per 100 m²	aantal stuks onkruid hoger dan 20 cm ≤ 30 stuks per 100 m²	aantal stuks onkruid hoger dan 20 cm > 30 stuks per 100 m²										
Meetinstructies: Onkruid														
Groen-beplanting					bodembedekkers-kaal oppervlak									
A+	A	B	C	D										
														
Er is geen kaal oppervlak.	Er is weinig kaal oppervlak.	Er is in beperkte mate kaal oppervlak.	Er is redelijk veel kaal oppervlak.	Er is veel kaal oppervlak.										
kaal oppervlak 0% per 100 m²	kaal oppervlak ≤ 5% per 100 m²	kaal oppervlak ≤ 10% per 100 m²	kaal oppervlak ≤ 25% per 100 m²	kaal oppervlak > 25% per 100 m²										
Meetinstructies: Kaal oppervlak														

“Natural trash”

Decomposing plant material, which recycles nutrients back into the soil, is undesirable

“Weeds on open - loose pavement”

Plants growing spontaneously on loose pavements are considered to be “weeds”

“Ground cover - bare surface”

Planted vegetation, which does not cover the area of desire is undesirable

INTERPRETATION OF CROW EVALUATION

EINDHOVEN, THE NETHERLANDS





In the Netherlands, guidelines have been developed to diminish the undesired and control Nature. CROW's<sup>27</sup> "Public Space Quality Catalog 2018: Standard quality levels for maintenance"<sup>28</sup> is a guideline used nationally in the Netherlands for maintenance workers to perform a specific type of maintenance within a given area. The CROW guideline uses a scale from A+ to D to describe the highest quality street (A+), a place of no damage, to the lowest quality street (D), a place of "Capital destruction, instigation of destruction, loss of function, legal liability [1] or social insecurity."<sup>29</sup> The municipality assigns each neighborhood with a category to indicate the level of maintenance to be performed, using the categories A+, A, B, and C. Category D is not a standard to be assigned, but rather a category to document, when the street quality fails to reach the level of category C due to lack of maintenance.

The CROW guideline touches upon maintenance of the topics: water, pavement, sewerage,

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27 CROW (short for Center for Regulations and Research in Soil-, Water-, Road Construction- and Traffic Engineering) is a Dutch non-profit foundation and "science platform", who offer research to governments and businesses who wish to design, construct, and manage transport, infrastructure, and public spaces

28 Own translation from Dutch to English of the title from: Kennisplatform CROW, *Kwaliteitscatalogus openbare ruimte 2018: standaardkwaliteitsniveaus voor onderhoud* (Ede: CROW, 2018).

29 Kennisplatform CROW, *Kwaliteitscatalogus openbare ruimte 2018: standaardkwaliteitsniveaus voor onderhoud*, 7.

furniture, works of art, green (grass), green (trees), and green (vegetation).<sup>30</sup> These hold different categories with related subcategories; for example, the topic 'green (vegetation)' holds the category 'flower box', with the related subcategories 'blooming', 'bare surface', 'weeds', 'fine litter', and 'coarse litter'. These subcategories indicate that the quality and character of vegetation is judged through Cheap desires, where 'blooming' is desirable and 'bare surface' and 'weeds' are undesirable.

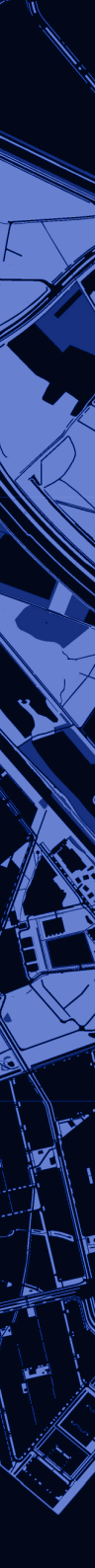
The desirability that denies the uncontrollable and decaying, and is in lust for the ever-blooming, is problematic, as decay is just as important an indicator of life.<sup>31</sup> According to Michael Pollan, the desire for the blooming is no coincidence, but rather the result of many years of natural selection, where the skilled forager would memorize the location of a flower as it was the promise of future food.<sup>32</sup> In this sense, the flower became an integrated symbol of growth and comfort in the human brain. However, building a guideline of maintenance upon a species-by-

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30 Translation from Dutch to English of "water, verharding, rioleren, meubilair, kunstwerken, groen-gras, groen-boom, groen-bepanting" in Kennisplatform CROW, *Kwaliteitscatalogus openbare ruimte 2018: standaardkwaliteitsniveaus voor onderhoud*, 35.

31 It is through decay that nutrition gets redistributed and plants regenerate, this process is also called 'the circle of life'.


32 Pollan, *The Botany of Desire*, 72–73.



species world view, where ‘blooming’ is allowed for desired plants only, is to separate and exclude the plant from important companion plants that can make the growth stronger and the local ecosystem richer.

This type of mobilization of desired plants into producers of beauty and comfort at the cost of local ecosystems is a strategy of Cheap Nature. In this sense, the CROW guideline preconditions urban spaces to be claimed as territory for the growth and upscaling of desired plants, and the removal and downscaling of undesired plants.

## **The Maintainer of Desires**



But it is not only vegetation which is being standardized within this framework. Humans and the labor they perform are too.

Maintenance service systems are tools for keeping Nature in check and human labor Cheap. Cheapening Nature makes it possible to create Cheap labor structures characterized by systematic, specialized, and repetitive work tasks, without considering the ecological consequences. According to Patel and Moore, cheap work is not just a specific set of actions, but also the way the work relations between human and more-than-human have been established, which again brings the highest amount of profit for the lowest compensation possible.<sup>33</sup>

The role of the maintenance employee is to maintain a street according to a specific CROW standard assigned. If the maintenance service fails to uphold the standard given to their assigned area, the organization receives a penalty from the municipality, reducing their revenue. It is therefore in the interest of the maintenance service to uphold the standards to the best of their ability.

In the municipality of Eindhoven, the CROW

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<sup>33</sup> Patel and Moore, *A History of the World in Seven Cheap Things*, 102–3.




standards are divided accordingly: the city center, cemeteries and the Woensel Mall are all category A; residential areas and parks, category B; and industrial areas are assigned category C.<sup>34</sup> This means that central areas in Eindhoven are exposed to a higher degree of maintenance than industrial areas, and that the occurrence of vandalism, litter, and broken objects (furniture, signs, artworks, and pavements) are less likely - as well as the occurrence of spontaneous vegetation.

The guideline requires employees to work in a very systematic manner, only performing the actions necessary to uphold the CROW standard. For employees within the green maintenance department, this means that training is not centered around botany or horticulture, but rather practical acts of removal and replacement. Training does not acquire knowledge of ecosystems and how to maintain these, which could question the actions of removal and replacement that the CROW standards require. Such actions might be necessary for inorganic entities, who are not able to decay and regenerate independently, and therefore need to be part of other recycling systems. However, for entities of organic character, this cuts the natural process of decay that enables regeneration and rebirth of

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34      see attached map



organic entities. Despite that removing organic material depletes soils and exhausts urban vegetation, such questions are not invited, as they could encourage employees to resist the Cheap standards given by the CROW guideline.

Objectifying and reducing knowledge of plants' qualities and characters is therefore an important strategy in Cheapening labor. It allows a distance to be kept from the plant dealt with, making it possible to act in a generalizing manner, to perform the same actions of maintenance despite the character of the entity dealt with. This makes it possible to treat a specimen of spontaneous vegetation growing in the street, and the plastic bag lying next to it, with the same standardized procedures of removal.


Objectification does not only support the separation of Nature and Society, it also initiates a structure of who is perceived as desired or undesired within Society. Cheap maintenance is a modern reflection of the Society of Benevolence, the historical precedent of social work, where orphans, criminals, and poor people were sent to colonies. Humans who do not take part in the offered Cheap labor structures, providing body and mind for the sake of profit, are stigmatized as undesired. However, people willing and able to take part in the narrow structures of Cheap labor, are perceived as desired and an asset to

Society. The only way to be desirable and avoid the unattractive stigma as undesirable is to take part in the capitalistic labor structures. In other words, like plants, humans are too being objectified, generalized, and systematized within the Cheap framework.

Maintenance services within Eindhoven are performed by social work organizations employed by the municipality, offering 'sheltered work' opportunities to citizens 'in need of adjustments or of more guidance'<sup>35</sup> than what most workplaces offer. In other words, 'sheltered work' is developed for people, who do not easily fit into workplaces based on cheap strategies, because the framework is not built for flexibility of time, space, or relations. However, 'sheltered work' is not developed with the intention to protect people from Cheapening, but rather to re-mobilize people, who would otherwise be excluded from the loops of profit. This is an attempt to keep people from being stigmatized as undesired, as someone who cannot be standardized and therefore is considered an obstruction to infinite growth. Fitting people within a lesser Cheap structure enables

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35 Definition of sheltered work from the Dutch Ministry of Social Affairs and Employment / Ministerie van Sociale Zaken en Werkgelegenheid, 'Over beschut werk - Beschut aan de bak', webpagina (Ministerie van Sociale Zaken en Werkgelegenheid, 30 May 2017), <https://www.beschutaandebak.nl/over-beschut-werk>.

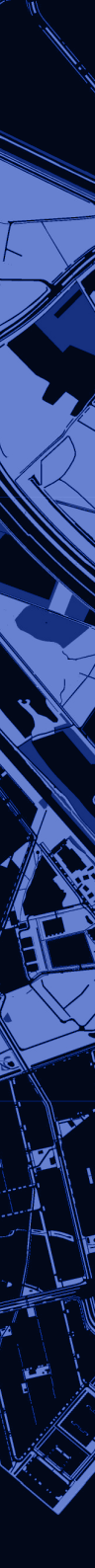


partaking and schooling in the objectification, standardization, and scaling of Nature, which creates a position of being desired.

For people working in ‘sheltered workplaces’ within Cheap societies, it is difficult to refuse work conditions as there are not many alternatives available to Cheap work. And as Cheap societies are based on monetary economies, not having a job equals an unstable economic situation as well as the stigma of being undesired. This means that people in need of non-Cheap workplaces have fewer work opportunities and a higher risk of being stigmatized as undesired.

Providing employees with knowledge of urban ecosystems could create a resistance towards current maintenance practices, and thereby put the employee’s workability in question. Despite the possibility of excluding such knowledge due to good intentions of protecting the employee from the stigma as undesirable, or to economic concerns of the maintenance service itself, such practices maintain the employee within the Cheap system that put the employee in an undesirable position in the first place. In this sense, maintenance practices create autoimmune processes which not only affect the well-being of urban vegetation, but also the well-being of the workers performing such maintenance.

## **From Closed to Novel Mindsets**



Cheap desires, based on the framework of Patel and Moore, and Tsing's theorization of scalability, describe how the mobilization of people and plants work for the benefit of the few at the top of Society. Such desires are driven by a separational worldview of "Society and Nature" and are grounded in the histories of plants and humans. In the Netherlands, Cheap desires continue to manifest through maintenance practices and ornamental plant cultivation industries, where desirable vegetation is planted and controlled, and where people are fitted into standardized systems that create profit.

The histories of *Tulipa* and *Fallopia japonica* expose the complexities of determining plant nativity and show how plant histories intertwine with human histories. As landscapes evolve over time, so does the spontaneous vegetation that inhabits it. Novel ecosystems are based on vegetational spontaneity and human developments, their pure existence invalidates the narrative of humans and plants as separate. It is therefore necessary for urban citizens to co-evolve with nature and continuously challenge these relationships in gardening practices and urban maintenance strategies. Acknowledging the value and importance of ecosystems built on the agency of plants makes it possible to embrace

plants' ability to regenerate ecosystems which got destructed due to the Cheapening of Nature.

Current maintenance is an autoimmune mechanism which harms urban ecologies by the pure aim of preserving desirable plants through the eradication of undesirable, spontaneous ones. It objectifies and channels people who has been stigmatized as undesirable into the very systems, that caused such stigma. What maintenance really is maintaining, is autoimmune mechanisms that sustain Cheap systems and create stigmatized societies.

The thesis suggests that the acknowledgment of spontaneous vegetation might relieve the capitalistic desires that have created exploitative attitudes towards nature and people. This could contribute to the reintroduction of species that has been lost due to urbanization and might even increase urban biodiversity by assembling novel ecosystems.

A change of perspective is necessary to embrace, include, and secure urban ecosystems in the future and respond to the biodiversity crisis of today. It all comes down to the question of which mindset to maintain.





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## Image Index

### Cover

<https://s3.amazonaws.com/huhspecimenimages/JPG/02055011.jpg>

### Tulipa

a. [https://intermountainbiota.org/imglib/storage/vt/vplants/UVMVT110/UVM-VT110990\\_lg.jpg](https://intermountainbiota.org/imglib/storage/vt/vplants/UVMVT110/UVM-VT110990_lg.jpg)

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