

Green Curation:

Plants as a Vehicle for Curation

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Abstract

This project focuses on how green curation, and the incorporation of natural elements such as plants, can be utilized in a decorative, aesthetic, and/or process oriented way within both an artist's practice and within exhibition spaces such as galleries and museums. The project focuses on the effects of light, humidity, and plants on both people, and the artworks and strives to find a balance which would allow for green curation to become a more viable option, both within the spaces of an artist's own gallery, in an experimental exhibition space, as well as under the strict preservation guidelines of a museum. Ideally, this project will bring to light potential solutions for each area in question, and offer ways in which green curation can expand and grow as a contemporary curatorial form, offering unique benefits and advantages when compared to others, such as salon style and white cube. This project is a combination of a research paper, exhibition plan, and artworks.

Keywords: Green Curation, Museum Practice, Arts Administration, Plants, Art

Green Curation goes hand in hand with other green technology and green lifestyles. It is a curatorial experience in which plants are meant to be incorporated into the exhibition space, both as an enhancement to the experience, and as a way to incorporate new, decorative, eco-friendly installations which enhance the visitor's psychological mood. This writing hopes to offer potential solutions for the implementation of, and possibility of green curation as a curatorial method within each type of exhibition space; from the experimental exhibition space to contemporary, non-collecting institutions, even to AMA accredited museums. The goal of this paper is not to suggest utilizing stand-ins, like fake plants or cut plants, but rather to utilize living plants as a part of curation, and as such, while these might be potential solutions, they will not be included in the ongoing conversation here.

Museums, Institutions, & Exhibition Spaces

Many museum's primary function is to collect artwork of a specific time period, theme, or nationality, and catalog, preserve, and protect these artworks. This makes the museum space the most finicky when it comes to their specific requirements with regards to lighting, humidity, and general control of the artwork. Museums have very strict standards for the exact amount of light an individual piece can be exposed to, and when handling another museum's works, this can be even more strict. While a museum does exist to showcase and catalog work, many prioritize the preservation of artwork, and the prevention of any additional, unnecessary damage, for example the Weatherspoon's mission statement says "The **Weatherspoon** Art Museum at the University

of North Carolina at Greensboro acquires, preserves, exhibits, and interprets modern and contemporary art for the benefit of its multiple audiences, including university, community, regional, and beyond.”. This makes light, humidity, and as a result, plants, commonly seen as an enemy to the artwork, and for good reason. Improper use of an object which incorporates heavy lighting, constant moisture, pests, and dirt is an absolute horror from a preservation perspective. Ultimately, museums are the most strict and represent the most gated institution in which green curation might be possible, and as such, it is one of the primary focal points of this essay, and one of the primary examples will be utilizing the Weatherspoon Museum here at UNCG, and minor references to AMA and various guidelines and regulations. However, it is important to make distinctions between the different institutions. The next most regulated institution would be a contemporary, non-collecting institution.

There aren't just typical museums in the spotlight anymore, institutions who are non-collecting contemporary art spaces have grown and filled their own niche within the arts. They are able to have more freedom in how the artwork is treated and intended to be used, with their primary responsibility being towards representing the art how the currently living artist wishes it to be represented, while still having the same level of care and responsibility that a museum is typically expected to have for the art in its possession. These organizations are non-collecting, meaning that they are not driven to own, protect, and preserve a collection of art, and as such, they do not have a collection somewhere in the building which requires the strictest of care. The most important thing is the works that they have on display at that time, and the wishes of those artists. To

put it a bit more simply, the artist's intention is at, or potentially above the responsibility to protect the artwork. If the artist's intention is that the artwork is slowly destroyed over the duration of the exhibition, then that would be possible here. This is much more difficult to allow within a collecting, AMA accredited museum context. As such, these are the secondary level of museums and exhibition spaces, in which there are significant standards that must be upheld, while also allowing for some freedom driven by the intentions of the artists. Finally, the third set of organizations are more along the lines of experimental exhibition spaces and galleries.

Experimental exhibition spaces differ greatly from the other locations that would normally showcase artwork. They do not have much of a requirement in terms of the long term care and preservation of the artwork, as their name implies, their primary function is to exhibit the work. This is not to say they do not care for the artwork, in fact, they are oftentimes very tedious and careful with each individual work, but they are technically able to bypass this, if the artist or exhibition were to require it. In this sense, exhibition spaces have the lowest requirements in terms of an artwork's care, while still upholding careful guidelines to ensure an artwork's safe return to an artists hands, should they desire that. This gives exhibition spaces the largest amount of freedom when it comes to incorporating experimental and/or potentially risky curation styles, artworks, and exhibitions that would be impossible to utilize in a museum setting. This makes them naturally the perfect space for experimental curation and things like evanescent artwork and self-destructive pieces, they are the initial area in which green curation will be able to thrive and grow, but it is very likely that there is definite potential

and possibility for something like this to happen, most importantly, safely, in a museum or non-collecting institution. For this particular paper, the Greensboro Project Space is a good example of these more experimental exhibition spaces, which, as far as professional exhibition spaces go, has the most freedom to work with experimental aspects of curation.

Curatorial Styles

There are many methods of curation, and green curation is just one potential option of many. Currently, one of the most popular methods of curation is the White Cube style. This style is utilized by many, perhaps even most galleries, and most, if not nearly all museums. For instance, the Weatherspoon utilizes White Cube for its exhibits. This style utilizes white walls, a sterile, non-decorative atmosphere, and has a preference for the minimal. Frames are often kept very simple, with a preference for white or black frames. This style has the advantage of looking good with almost everything, and its place as the primary curatorial style likely won't change. Before White Cube, Salon Style was a particular style that was used, and it might as well be the opposite of White Cube. The style features very dense, crowded gallery spaces of multiple pieces, oftentimes hung from one wall to the other in multiple rows. Different types of installation are incorporated throughout, and the works almost homogenize into one massive, awe-inspiring exhibit. While this has significant impact, at times, it does not give each work enough room or space to breathe and really show their own vision and intentions. Both have limitations and advantages that the others lack. The Barnes Foundation and Elizabeth Stewart Gardner Museum are excellent examples of Salon Style. Finally, another contemporary exhibition design styles, seen in museums such

as the Gregg, and occasionally, NCMA, features almost maze-like, winding exhibitions of multiple walls, with colored accent walls emphasizing artworks. These each accomplish specific goals and enhance or create different exhibition experiences. Green Curation is an option that could offer unique experiences that enhance exhibitions in a way that other popular methods of curation may not be able to. In particular, it may function well as a sort of secondary method to further enhance and add variety to the way exhibitions can be made, creating key moments of engagement and emphasizing a connection to nature and our relationship with it.

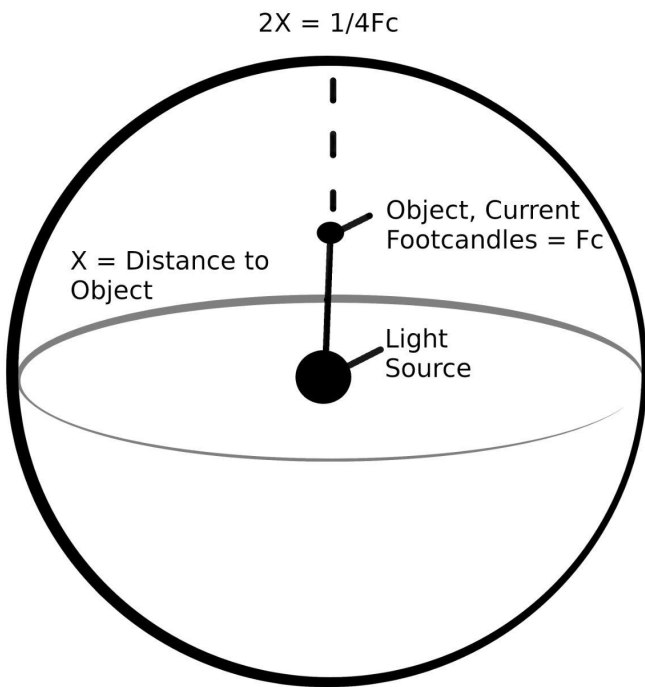
Problems in Green Curation

Lighting

One of the largest issues with housing artwork for longer periods of time within an area containing plants is the difference in light levels required. A plant, even one that enjoys shade, requires a much higher light level when compared to the very sensitive aspects of say, watercolor or pastel drawing. To paint a clear picture for you, here is some information from the Philadelphia Museum of Art about recommended light levels for artworks: “most artwork should not be exposed to anything over 15-20 foot candles, this includes many oil paintings, tempera paintings, wooden sculpture, etc. etc. Watercolor paintings in particular are especially fragile to light, and should not be exposed to more than 5 foot candles.” How many foot candles do you think a plant needs to be exposed to? Many require an absolute minimum of 100-200 foot candles to maintain their size, and require 200-400 to encourage growth. Some even require light levels within the 1000 range. This is one of the clearest, and most difficult problems to navigate, and as such, it’s the perfect problem to open with. Foot candles are based on

the amount of luminosity given by one candela within one foot, and is distance based, meaning the only way works and plants can safely be arranged, long term within a museum would be to maintain a very specific level of lighting and distance away from a piece. Lighting of nearly 400 foot candles would need to be contained almost entirely to where the plant is, ensuring that very little light escapes. Footcandles reduce by nearly 75% each time the distance between an object and a light source are doubled. This is illustrated in the diagram below, in the bottom left. As such, the best solution is to create a specialized plant enclosure (See below, bottom right), utilizing a reflective box to contain the light within the enclosure, letting it out the front, and diffusing the light to prevent it from damaging any particularly fragile pieces, ensuring they are a safe distance away from the resulting increased lighting. Possible solutions include diffusing drapes, a mirrored enclosure, and a mix of incorporating good lighting, exhibition design, and distance. This would be done to maximize the light level for the plant, while also minimizing the light level for the artwork in question. The major limiting factor here will be that museums and exhibition spaces of a smaller size will be unable to do this as effectively as larger areas, to put it simply, the larger the room, the easier it is to diffuse the light over a distance. In exhibitions, there is usually one constant level of lighting that is maintained through the exhibition layout and lighting setup, plants would naturally disrupt that consistency. The largest issue here, would be creating a cohesive experience in an exhibition that may be unevenly lit. This, if done incorrectly, could be a very jarring experience and as such, specific location and experience must be taken into account on an individual basis, exhibition by exhibition, as well as museum by museum.

Even the shape of the room and whether walls are present will play a factor in what's possible in utilizing plants in an exhibition space.



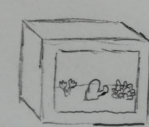
Infinity Boxes/Terrariums

inspired by Yayoi Kusama

Plant Height
+ 3"-4" Soil
+ 1 ft from bulb


1-1.5
MIN

1 Bulb 300-500 Fc
3 or 4 Mirrored panels



Vary scale w/ plants

Vary Shape as an Artist



← Mirrored 240°

Visual Concepts: Incorporate Projection, Videos, Light shows, etc.

<p>PROS</p> <ul style="list-style-type: none"> Contains Light Contains Dirt & Pests Interactive installation 	<p>CONS</p> <ul style="list-style-type: none"> Cost & maintenance Bulky (potentially) Somewhat disconnected
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Humidity

Another major issue with storing plants along with artwork is the difference in humidity. A plant requires constant watering, and decent humidity levels, whereas a piece of artwork requires nearly constant monitoring of humidity, with no fluctuations. There are different numbers that work for different types of artwork, but generally speaking, 50 percent is a good number for a large amount of works, and falls within the acceptable ranges of most artworks. What is most important here is consistency, and avoiding large fluctuations. This isn't actually so much of a problem as it seems, as that is a fine humidity level for many plants, and shouldn't be a huge issue, except for very particular types of tropical plants, which of course would not do well indoors in a temperature controlled building anyways. According to Susan Taafe, a preparator of the Weatherspoon, there are many materials that would not react to humidity fluctuations, including some types of metal, sealed pottery, and many materials which have been sealed, but what about the materials which are far more sensitive to humidity? Apart from the enclosure mentioned earlier, there are many solutions here, actually. One solution is to utilize very low humidity plants, such as succulents and many forms of cacti, although cacti might be a slightly dangerous installation to have around children and therefore, succulents are likely the best option of the two. These plants are usually very low maintenance, requiring only periodic watering, and specific temperatures, at which the museum is already kept to a highly controlled, very specific level. These succulents would need occasional trimming within a museum setting, as the lower light levels would cause them to grow long and etiolated, however, this could be an intentional, accompanying accent to a specific exhibition. Ultimately, the succulent is

likely one of the safer plants to incorporate into a location which requires specific humidity, as it would require the least amount of watering. Another plant choice could be air plants, which require a constant level of humidity, but do not require any watering, or even soil. These plant choices could drastically affect what types of enclosures or structures may, or may not be necessary for utilizing plants in an exhibition space.

Another significant option would be utilizing the enclosures, and/or terrariums to contain these plants, which would allow for a higher self contained humidity level. Imagine something like a humidifier container, in which the humidity could be kept high, while everything outside of this enclosure would remain the stable 50% humidity required. This would allow for a solution for an exhibition or artist with a desire for a bit more exotic and tropical plants. However, due to the finicky nature of high humidity, high heat plants, this would not be recommended within an AMA accredited museum, with the previous plants, air plants and succulents, being far better, and safer options.

Soil & Pests

Most plants necessitate soil in order to grow. Generally speaking, in a sterile and clean area like a museum, dirt isn't exactly a welcome guest. It may seem like a seemingly minor danger, but dirt and soils, especially while wet, are a danger to artworks as well, especially those that are very sensitive and delicate. Paper works in particular are at risk here, such as watercolor, prints, and anything that might utilize something fragile and delicate like tissue paper or origami paper. These materials could

be stained as a result. Moreover, in most cases, dirt reaching an artwork would likely be caused by a pot falling and breaking, which could also have shards of pottery hitting frames, gouging paper. These risks aren't very likely, but are legitimate causes for worry. However, these issues can be mitigated by allowing a distance between the artwork and any plant based forms, and more importantly, the pots can be made of materials that are less susceptible to shattering, such as shatter resistant ceramics, plastic, and/or various types of coated, water resistant metals. If these were then contained within something like a terrarium, mirrored box, or a humidifier, this would further protect the pieces from the dangers contained within, including potential dirt, stains, and the previously mentioned shards of pottery.

One of the most important, uncontrollable issues of bringing plants into a curatorial space isn't actually the plants, the light, the humidity, or the dirt. To some degree these can all be, for the most part, controlled. What can't be controlled as easily are pests. Insect eggs, mites, and parasites associated with plants and soil can be present in these plants. In order to remove these pests, the soil would need to be boiled, sterilized, and then the plant would need to be carefully inspected, before potting and growing within a controlled environment. This would help drastically reduce the risk of these pests making it to the museum to begin with. Furthermore, if the plants are contained within a terrarium, mirror box, or some sort of humidifier, these pests would have difficulty escaping the enclosure which would better protect the artwork. Still, while this may be a good way to prevent issues, there are still risks of pests that are particularly dangerous to museums. Termites and burrowing beetles would be especially

dangerous, and there is some risk involved in this curatorial style, which may not make it a well suited method of curation for something like an exhibition in which everything is fine, wooden sculpture. Furthermore, if pests are found, the exhibition would need to have the infected artwork removed, stored, and fumigated immediately to prevent future damage and future infestations. There is also the option of using something called Leca Balls. These are clay terracotta balls which expand and absorb water, these can replace soil entirely, and will reduce the amount of bugs, and as a result, pests, which will be present in the soil. This also protects the plant and helps prevent root rot. The biggest thing to keep in mind here is that because these are clay balls, and are not alive and filled with nutrients, a plant will require significantly more fertilizer and nutrients which it may be able to get from something like a hydroponic fertilizer. These different steps would help reduce and prevent pests and issues involving the soil, and each have the added bonus of offering benefits to the plants as well. Ultimately the soil and the possible presence of bugs is one of the most dangerous aspects of bringing a plant into a museum space. Another, plant based solution is the use of hydroponic plants, which would remove soil in place of structures or tubes of water in which these aquatic or semi aquatic plants can grow. This is obviously a high cost measure that would be impossible to implement on a small scale and would need to be a relatively constant installation, making it not necessarily the most ideal solution. Therefore, air plants, in this situation, become one of the best options, as they eliminate watering and soil needs almost entirely, and are a very low maintenance plant to incorporate into an exhibition. Another, more complex option would be to utilize orchids, or other plants that grow on trees, rocks, and other areas, this is actually what an air plant is doing as well. These types of

plants are called epiphytes. Air plants are a much more low maintenance option and would be the easiest to incorporate at the lowest cost when compared to other types of epiphytes.

Solutions in Green Curation

There are a wide variety of solutions that could be implemented on an exhibition by exhibition basis, and certain solutions are more effective in larger, or smaller museums. Depending on the museum or exhibition spaces' specific missions and preferred curatorial style, some solutions might be more ideal as well. For instance, one solution would be to utilize hydroponic plants, which could be incorporated into a room via large tube-like structures, wrapping around the gallery walls as a decorative element from above. These would be self contained within hanging apparatus, and would simply be maintained by maintaining the water levels. This would be low maintenance, but have a high cost to install initially, making it best suited for a larger institution, or an institution where this would not need to be changed for multiple exhibitions.

As mentioned previously, air plants are another suitable, low maintenance and low cost example of incorporating plant based curation into an exhibition. These plants, as their name implies, absorb moisture from the air, and do not require soil or potting. These plants are very similar in nature and appearance, so they would not have a lot of versatility or variety, but are one of the easiest and most low-cost ways to safely incorporate plants into an exhibition. This would require some sort of method for hanging and suspending these plants, or creating small little enclosures for them to sit

in, but would otherwise be very realistically attainable for almost any space. For slightly more variety, but more maintenance and cost, orchids and other epiphytes would be decent alternative options.

Succulents are a low humidity plant with, for the most part, relatively low maintenance requirements. These plants require more light than others, and will grow etiolated and elongated if they do not receive enough sunlight, however, many function well within an indoor setting, and their small size, slow rate of growth, and low water requirements would make them another ideal plant for green curation. Furthermore, they have a large amount of visual variety, colors, and appearances that could be used to complement and enhance specific exhibitions. Soil should be boiled, sanitized and prepared beforehand, allowing the plant to take root and be ready for exhibition, reducing the chances of any types of pests in the soil. Cacti are another option, however they would require occasional maintenance to trim the spines, or they'd need to be housed in enclosures to protect children from potential accidents.

Plants of nearly any kind could be contained within one of three different types of structures. Terrariums are a simple self contained structure that would help prevent many of the problems that plants bring as a danger to institutions. These could be designed into different accompanying shapes and sizes to create small terrariums of plants and mini gardens to enhance the gallery experience. Terrariums have the benefit of being relatively low cost, and are typically made of glass or plastic. A humidifier could be used to contain higher heat, or higher humidity plants, such as tropical plants,

however, this would require a constant power source for each plant, and the unnecessary cords would prove more distracting than anything else. Finally, an infinity box based on Yayoi Kusama's work would lend itself naturally to creating a mysterious, interactable object within galleries, in which plants could be seen, the sides of the box would be mirrors, protecting the works on either side of the plant from any harmful light. As a result of being within an enclosure, this would also have most, if not all of the benefits of the terrarium mentioned earlier.

Finally, for the more cautious, simply creating enclosed areas, similar to how cinematography is typically showcased in a gallery or exhibition would be an excellent way to contain intense light within a small alcove, in which there could be, perhaps a light inert object, a resting space, and a few plants for a sort of 'outdoors' moment to step out of the exhibition and into. This would of course need to fit in with the intentions of the exhibition, and should not simply be added on to an exhibition which would not benefit from it.

The Future of Green Curation

Green Curation goes beyond just artists, administrators, and the incorporation of a simple house plant. While this research aims to provide solutions to incorporate plants safely and simply, that is not the end result of green curation, but rather, the beginning. As green curation becomes more valid and possible, it opens doors to different types of works, living artworks is one specific type of installation that would suddenly have a space in museums, these artworks could be living plants which grow organically and adapt to the space they are given, but it could deal with fungi, or some other type of

living organism in a safe and optimal way, which would allow it to be incorporated into an art space, along with other artworks, safely. Moreover, this could lead even further to green walls, integrated natural walls which could insulate and maintain temperature and incorporate green architectural aspects into museum spaces as well. This could mean a large, living wall of moss, it could mean an internal garden park, it could mean a number of things that currently aren't considered possible within a museum space without compromising extremely important artwork. These types of installations and solutions could help pave the way to a new curatorial style which could synergize well with the currently ongoing change to greener practices. The museum space is a space for dialogue and a space for community, and green curation can foster, enhance, and engage with both of those aspects of museums in a contemporary world that is evolving and growing greener and greener. Moreover, this gives a space for artists who work with living material, or integrate natural material into their works in a way that may necessitate these types of precautions in order to protect and preserve both their artwork, and the others around it. Ultimately it's not a matter of if green curation will be needed, but when it will be needed.

Ultimately, green curation is an experiential type of curatorial style that would only be appropriate for specific types of exhibitions and setups. There is room for green curation within all types of museums and exhibition spaces, however it is very likely that these solutions will initially be experimented within the experimental exhibition spaces, such as Greensboro Project Space, and non-collecting contemporary institutions, such as VCA, before they can appropriately be integrated into ADA accredited museums,

which would require far more research into the subject in order to determine the viability, and whether or not their particular collection would benefit from this type of curation at all, as some simply will not have a need for it given the context behind their collections. For future explorations into this subject, the next obvious step is to take the diagrams and research here within this paper, and begin to apply them to a real world setting, creating multiple prototypes and experimenting with the artistic aspects and how these structures behave and contribute to light levels within an exhibition, ultimately there will likely be tweaks throughout this process, much like any experimental process.

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