GARDEN OF NECESSITY: SUSTAINING OUR NATURAL AND CULTURAL INHERITANCES ON THE NATIONAL MALL

by

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(Under the Direction of Sungkyung Lee)

ABSTRACT

People living in the present are the recipients and guardians of two types of inheritance: cultural and natural, both of which must be passed down to future generations if society is to survive. In the built environment, places of cultural significance are managed for their heritage value, often overlooking the value of functional natural systems, which are of equal value. The National Mall is one such landscape, which subordinates natural inheritances to those of cultural significance. This thesis synthesizes theories of heritage and sustainability to support the introduction of a new garden on the Mall that acknowledges and celebrates the critical natural systems that support our culture. This thesis also examines the historic condition of the United States Department of Agriculture grounds and finds evidence that ecological processes were a prominent design feature of the Mall in the nineteenth century.

INDEX WORDS: Landscape architecture, National heritage, Sustainability, Cultural landscapes, National Mall, United States Department of Agriculture, USDA, William Saunders

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DEDICATION

To my family

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Throughout my education, there have been countless individuals who have helped shape my point of view. From my teachers and mentors, to my employers and friends, there are so many people to thank that I regret that this page can only list a few.

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CHAPTER 1

INTRODUCTION: FRAMING A SYNTHESIS OF IDEAS

When William Saunders looked out over the National Mall in the late nineteenth century, he saw a very different landscape than the one that exists today. Extending from the Capitol building to the Washington Monument, the Mall consisted of several gardens planted in a variety of styles. Saunders was superintendent one of these gardens, the Experimental Gardens and Arboretum of the United States Department of Agriculture (USDA), which he himself had designed almost thirty years earlier. Absent were the many monuments, memorials, and classical buildings, which today occupy the public space of the Mall. Absent too was the open lawn that stretches from the Capitol to the Lincoln Memorial. Nevertheless, the Mall carried significant meaning then as it does today.

Saunders saw the Washington Monument, a symbol of national unity, built during a time of national hostility and conflict; the Smithsonian building, a symbol of education and learning, embodying principles of democratic participation; the Capitol dome, located atop a geograpical prominence, firmly anchoring the seat of power with the legislative body rather than the executive. All of these structures gave this landscape cultural meaning, but he saw more than this.

Saunders also saw the object of thirty years of his work: the USDA gardens and arboretum. These grounds represented a different meaning; meaning grounded in principles of experimentation and close observation, of systems thinking, and of sustainable agricultural development. Saunders used these grounds to learn about improving agricultural methods, but he

also wanted the garden to charm the public. He wanted visitors not only to walk away with more knowledge, but also to acquire the desire to study horticulture and support rural living, instilling values as well as knowledge (William Saunders to Commissioner of Agriculture Horace Capron, January 13, 1868, National Grange of the Patrons of Husbandry records). This garden represented a synthesis of cultural and natural values, inseparable because one depended upon the other.

When Saunders died in the fall of 1900, the National Mall was only a few months away from being spatially unified by the McMillan Plan of 1901. Shortly thereafter, the USDA's experimental grounds were demolished and relocated to land better suited for large-scale experiments outside the city. Thus the legacy of responsible land stewardship was lost within the built environment of the National Mall, which became more and more focused on the symbolic representation of national heritage, separated from the ecological systems that form its context.

Today, the USDA is reviving its legacy by building a garden on its grounds adjoining the National Mall that will promote principles of sustainability and the value of natural processes. The Mall today, however, is a place that is managed for its cultural and aesthetic values. Although these values, cultural and natural, may seem at odds in a landscape like the Mall, they are in fact mutually supportive and dependent on one another.

The National Mall is the definitive public heritage landscape in America. Its spatial framework describes the very structure of the United States government. Its classical symbolism and architecture symbolically trace the nation's origins back to Greece, crowning America as the heir to Western culture and civilization. Its collection of monuments and memorials promotes an official national heritage, legitimizing and sustaining civic institutions through the creation of a collective national identity. Its public expanse of lawn gives citizens a national stage to represent

themselves and their interests in a bid to air grievances or win political power. It also houses the work of some of America's most talented and important architects and landscape architects. From Lawrence Halprin's National Franklin D. Roosevelt Memorial to I. M. Pei's East Wing of the National Gallery, and Frederick Law Olmsted's plan for the Capitol grounds, the Mall represents the work of important American designers throughout its 220-year history.

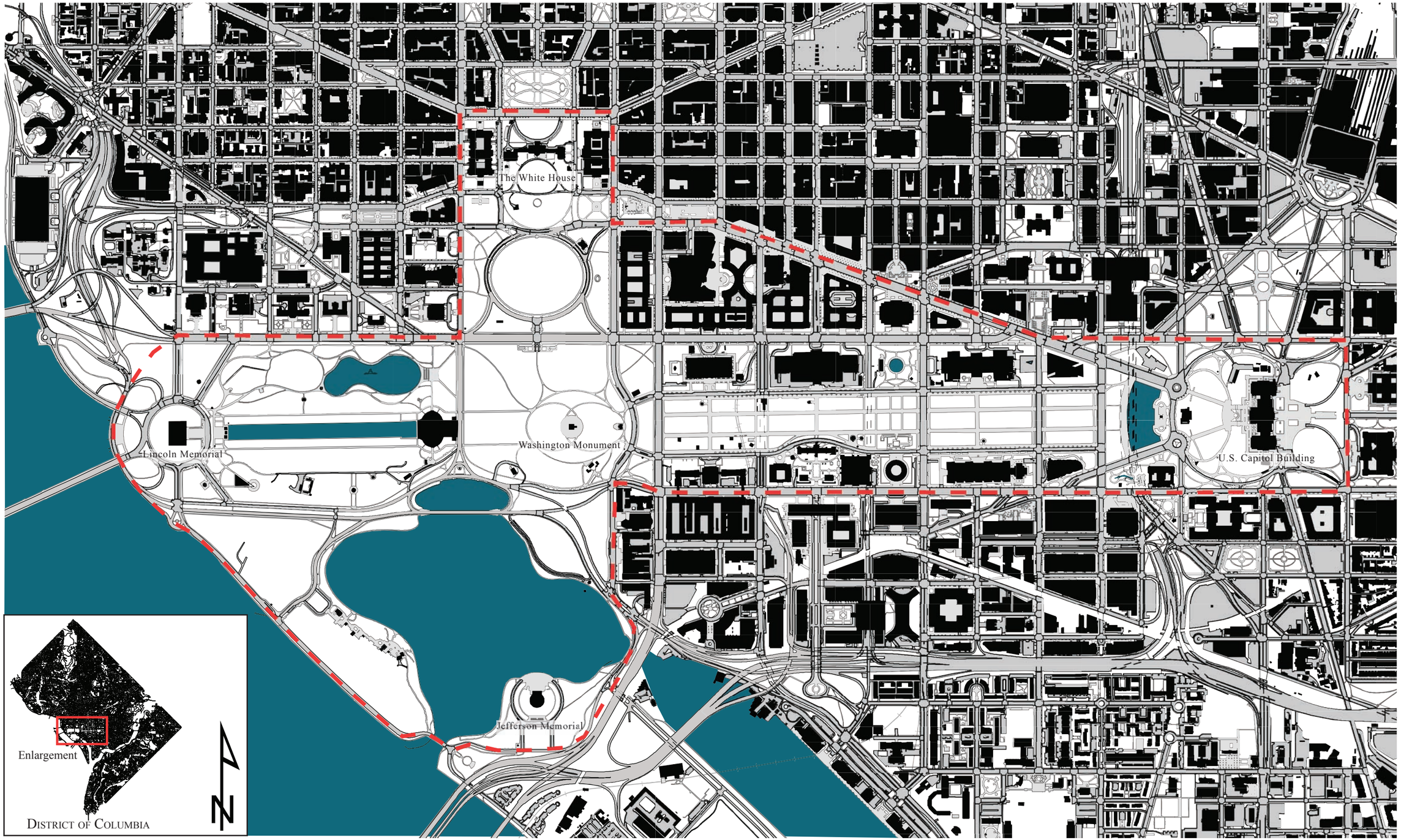
The National Mall is also the most sought-after space for built representation of America's diverse social groups, as each seeks to weave its own identity into the collective story of the United States. The Mall, however, is a finite geographic resource with distinct boundaries and increasingly limited space (Figure 1.1). Defined by buildings, streets, and the Potomac River, the Mall consists not only of the central open lawn space, but also the buildings and gardens which directly adjoin it. In order to build upon it, interested groups must justify their project's importance to a diligent set of government agencies, including the National Capital Planning Commission (NCPC) and the Commission of Fine Arts (CFA). These agencies are responsible for stewarding the unifying aesthetic of the Mall, as intended by the L'Enfant and McMillan Plans. In recent years, these governing bodies have convinced many projects, such as the Eisenhower Memorial, to move elsewhere, easing pressure on the monumental core. In 2003 the United States Congress declared the National Mall "a finished work of civic art" (Illia 2005, 58), shifting the professional dialogue to the preservation of current forms, rather than the introduction of new ones (Hines 2003, Taylor 2010). Permission to build on the Mall is rarely granted, so justification for new constructed features must be robust and convincing. The formal expression of the new construction must also fit the existing aesthetics of the unified landscape.

The National Mall is rightly valued and protected as part of a collective responsibility to future generations. People derive cultural meaning from symbolic qualities of this landscape,

and part of the Mall's function is to pass this meaning down as part of a bequest to future generations. This cultural bequest can be called heritage, a social construct that uses the past for contemporary purposes. This concept will be discussed in depth in Chapter 2.

An argument grounded in ideas of heritage can be used to justify new construction on the Mall if that heritage is deemed essential to the creation of national identity, despite the strictures of the agencies responsible for stewarding the landscape, that is, new works can be built on the Mall if the heritage symbolized has importance at the national scale. Recent examples include the National World War II Memorial, the National Dr. Martin Luther King, Jr. Memorial, and the National Museum of African-American History and Culture. Revisions to the Mall continue to be made despite a regulatory move toward preservation, as each subsequent generation seeks to make its own mark on this landscape. Lately, a move toward sustainability in the landscape has emerged on the Mall as increased awareness of ecological principles changes our perception of this monumental space. One example of this can be found in the National Museum of the American Indian's ethno-botanical garden, which links Native American cultural heritage with the natural systems that support that heritage (Courtenay 2004, 16).

Figure 1.1—Plan showing the location and boundaries of the National Mall in Washington, DC. The National Mall is defined differently by the several agencies who oversee it, and their jurisdictions overlap. These boundaries encompass the National Mall as the author understands it. Not to scale. Plan by the author.


The White House
Lincoln Memorial
Washington Monument
U.S. Capitol Building
Jefferson Memorial
Enlargement
District of Columbia
N

The USDA is part of this movement, and is taking steps to rehabilitate their six-acre landscape on the National Mall that will become a public showcase garden, explaining and promoting principles of sustainability in the landscape. This initiative represents a growing effort to promote values related to the ecological functioning of the land, and the healthful benefits of good nutrition. In many ways, the National Mall is an ideal location for such an educational garden. With over twenty five million visitors from around the globe each year, built elements on the Mall have the ability to reach a large and diverse cross-section of an international population (McIntyre 2008, 48). Building such a garden, however, entails the addition of constructed elements to the landscape of the Mall, and thus requires the approval of both the NCPC and the CFA.

As the USDA develops plans for a new sustainability demonstration garden on its grounds on the National Mall, it is imperative that they develop a persuasive justification for these formal additions. A justification based only on ideas of sustainability, which for many people remains an imprecisely defined concept, may not be sufficient to meet the approval of those agencies responsible for protecting this important landscape, especially because the forms and materials involved in sustainable landscapes are often unconventional. The idea of national heritage has been used to justify new construction on the Mall, in spite of the building moratorium imposed by regulatory agencies; but, can the USDA synthesize principles of heritage with principles of sustainability to justify introducing contemporary forms and meanings in the historic landscape of the National Mall? If the synthesis of these ideas is convincing, what guiding principles can the Department take from this combination to develop a program and formal expression for this garden?

This question can be seen as part of a larger issue. In the past, heritage value tended to trump other values within landscapes that were being managed as historic. Recently, new management paradigms have emerged, which embrace a wider range of values in making management and interpretation decisions and which acknowledge the inevitability of change in landscapes. Management of heritage, or cultural, landscapes has begun to embrace directed change as a way to maintain integrity. Managers acknowledge that change in the landscape is inevitable, and they interpret and manage that change rather than attempting to arrest it. Catherine Howett, Professor Emerita at the University of Georgia, has written extensively on the management of cultural landscapes. She identifies the definition of 'integrity' as problematic in managing cultural landscapes. Instead of focusing only on the survival of static physical forms from an interpretive time period to define integrity, the landscape should be seen as "an assemblage, arrangement, and function of parts that was subject to change over time within those same dates" (Howett 2000, 191). Also, new ways of assigning value to heritage landscapes are beginning to emerge. Randall Mason, Chair of the Graduate Program in Historic Preservation at the University of Pennsylvania, argues for an inclusive view of values. Writing as a preservationist, he advocates for looking beyond historical and aesthetic values to include others, such as social, monetary and urbanistic values. This moves away from the assumed dominance of heritage over other values in the field of preservation and allows for "retaining historical patterns and fabric while accommodating contemporary uses and changes" (Mason 2008, 180).

Cultural inheritances are rightly protected and preserved to pass down to future generations, but cultural inheritances are not the only bequest people receive from past generations. We are also the recipients of an inheritance of functional natural systems, without which we cannot physically survive. If we value our own perpetuation, we must not neglect

protecting both our natural and cultural inheritances. Though it may seem as if these two inheritances can be managed separately, this thesis will argue that *sustaining natural systems* cannot take place outside the *creation of a culture* that values natural things enough to act to perpetuate them indefinitely (Norton 2005, 339). When we understand the relationship between heritage and sustainability, we can apply this understanding to strategically intervene in the production of a heritage that fosters a community intent on protecting both its natural *and* cultural inheritances.

The purpose of this thesis is to support the USDA's initiative to build a landscape espousing principles of sustainability on the National Mall. Two different arguments will be advanced to build justification for this project. First, a theoretical argument that outlines the similarities between heritage and sustainability will be explored. Second, a historical study of the USDA's grounds on the Mall will show that principles of sustainability used to be prevalent in this landscape, thus grounding the USDA's new initiative as a continuation of past priorities. To accomplish this, literature on the theories of heritage and sustainability were reviewed and analyzed to extract similarities between the two concepts. Archival research was conducted at the National Agricultural Library, the National Archives, and Cornell University Library to uncover the purposes and formal expression of the nineteenth century USDA grounds on the Mall. Also, a contemporary site study of the USDA grounds was conducted, partially during a period of employment, to aid in understanding the current project and its goals.

The thesis will first present a theoretical framework defining heritage and outlining its various functions. Because this thesis focuses on a specific landscape of *national* character, particular attention will be paid to the functions of nationalism and national heritage as they

manifest and perpetuate themselves in built form and landscapes. Special attention will also be paid to the role of public space in both shaping and being shaped by various social groups.

This theoretical framework will then be used to interpret the history of the National Mall. As the quintessential landscape dedicated to the creation of the national identity, the Mall requires a contextual analysis because of its unique qualities and complex history. In Chapter 3, the thesis will draw connections between the theory of heritage and the Mall's various phases of design and implementation by directly relating the constructed forms on the Mall to specific functions of national heritage and public space.

The thesis will next develop a framework for the concept of sustainability, directly relating it to previously developed concepts of national heritage. By overlaying these two concepts, the thesis will justify the introduction and interpretation of sustainability into heritage landscapes, specifically the National Mall.

Lastly, a more detailed study will be conducted on the areas of the Mall that were held and managed by the USDA in the nineteenth and early twentieth centuries. By examining the values attached to both the aesthetics and functions of these historic components of the Mall, the thesis presents evidence that sustainability was both practiced and promoted within this landscape long before the term was coined, buttressing arguments in favor of presenting sustainability as part of the national heritage.

This thesis will conclude with an argument for the need to build a new heritage on the National Mall, one that connects the past with the future and promotes concepts of sustainability as key to the perpetuation of the national heritage. This argument will include guiding principles for a new garden on the USDA grounds, synthesizing principles of both sustainability and heritage.

CHAPTER 2

NATIONAL IDENTITY AND HERITAGE LANDSCAPES

Introduction

This chapter defines and explores the importance of heritage and landscape in contributing to the formation of a collective identity at a national scale. These theories will be used in the Chapter 3 to reveal meaning in the landscape of the National Mall, its development, use, history, and spatial extent. Revealing these meanings will aid in understanding the norms and expectations that dictate the use and appearance of the Mall today and will create a functional and aesthetic context in which the USDA will build its new garden. Defining a theory of heritage will also be necessary in synthesizing heritage with the concept of sustainability, which the thesis will address in Chapter 4. This synthesis will help justify the introduction of sustainable landscape on the National Mall.

The relationships between national heritage, public landscape, and social identity are complex and multifaceted. Mutually supportive in some ways and potentially subversive in others, these relationships use elements of the past to legitimize or challenge collective culture, including the existing polity, social structures, and traditions or rituals. These relationships also propel those cultural structures into the future, through physical representation and built symbolism. In order to discuss these relationships effectively, it becomes necessary to define what is meant by heritage, landscape, and identity.

In their book on geography and heritage, Brian Graham, Professor of Human Geography at the University of Ulster, G. J. Ashworth, Professor of Heritage Management and Urban Tourism

at the University of Groningen, and J. E. Tunbridge, Associate Professor of Geography at Carleton University, define heritage as "a view from the present, either backward to a past or forward to a future" (2000, 2). A critical component of this definition is that heritage is created and used in the *present*. Distinct from history, heritage "clarifies pasts so as to infuse them with present purpose" (Lowenthal 1996, xi). As such, it is not merely consumed by the public passively; rather heritage is actively selected and used for contemporary purposes. It is from these contemporary purposes that heritage derives its value. As John Bodnar, an American historian, puts it, "ordinary people…connect the past and present in a personal and manageable way" (Bodnar 1992, 3). Because heritage can be simultaneously used in conflicting ways, however, it is unavoidably "a major arena of conflict and contestation" (Graham, Ashworth, and Tunbridge 2000, 23). This conflict primarily centers on the questions of whose heritage is represented as well as how that heritage is interpreted. For the purpose of this thesis, heritage will be treated primarily as a nonmaterial concept to help differentiate it from the material landscape within which heritage is symbolized. The exception to this general rule is when the thesis talks about 'built heritage,' which means permanent structures or spaces that formally express heritage.

The word landscape has had several meanings throughout its history. It is sometimes thought of as a scene or view. It can also mean the representation of a scene in a painting. More recently, cultural geographers have given another dimension to the meaning of landscape by examining it as a conceptual phenomenon that describes the relationship between a culture and the natural systems that comprise its context. Denis Cosgrove, one of the most widely read and cited cultural geographers, argues that landscape is an "ideological concept" (1984, 15) in which a group of people represents itself, its point of view, its social role, and the social roles of other

groups within the context of the natural world. This definition implies that the dominant social group of any time exercises control over the space it occupies for self-representation at the expense of less dominant or marginalized groups. James Duncan, a cultural geographer at Cambridge, agrees that landscape communicates and reproduces a given social structure, but instead of thinking of landscape as a concept, he sees it as "as an ordered assemblage of objects, a text [that] acts as a signifying system through which a social system is communicated, reproduced, experienced, and explored" (Duncan 1990, 17). Both of these viewpoints support a notion of landscape as enabling a hegemonic power to "determine the limits of meaning for everyone else by universalizing their own cultural truths" (Graham, Ashworth, and Tunbridge 2000, 31). That is to say, dominant groups exclude points of view that challenge their power from being represented within the landscape. The consequence of this type of construct is that less dominant social groups find it difficult to represent themselves in landscapes controlled by hegemonic powers and are thus disinherited because of their inability to represent their own point of view in built form. Landscape is similar to heritage in that it may be seen as either a physical artifact, or a conceptual idea. Because this thesis extracts meaning from the built form of landscape, landscape will be treated as a *physical* phenomenon that carries symbolic meaning related to social and political power and thus can be deciphered to draw conclusions about the society that created it.

Identity may be thought of as a conceptual construct in which heritage is consumed and either assimilated into, or rejected from a social group's imagined inheritance (Graham, Ashworth, and Tunbridge 2000, 40-41). David Lowenthal, a writer and cultural geographer, points out that heritage does not encourage people to learn something, but instead encourages people to *become* something (Lowenthal 1996, 23). Bodnar describes memory as a source of

identity in America, and discusses the conflict between the 'official' and the 'vernacular' versions of the past. The official point of view is often "ideal rather than complex…[and] presents the past on an abstract basis of timelessness and sacredness" (Bodnar 1992, 14). Vernacular interpretations, however, are "diverse and changing [based on] views of reality derived from firsthand experience…rather than the 'imagined' communities of a large nation" (Bodnar 1992, 14).

When heritage is 'officially' presented, through words, art, or built symbols, it is consumed in one of two ways. The most common way is through passive consumption. Pierre Bourdieu, a French philosopher and sociologist, argues that the symbols and meanings of a culture are imposed on people by hegemonic powers to indirectly coerce acceptable social behaviors through the appearance of legitimacy, even though that culture is in fact arbitrary (Jenkins 1992, 104-105). The appearance of legitimacy is accomplished through an "empirically traceable history" (Jenkins 1992, 105) or storyline, which inevitably leads directly to the structures of power currently in place (Graham, Ashworth, and Tunbridge 2000, 19, 184). Non-dominant groups are disadvantaged by this process because "the cultural distinction of the dominant…is rendered remote and mysterious to them" (Jenkins 1992, 108) thus leaving them powerless to acquire and use it to gain power.

Graham, Ashworth, and Tunbridge (2000) agree that dominant groups use symbols to inculcate the universalization of their own cultural truths, but describe a kind of active consumption of the symbols, where the agent receiving the culture has the power to critically interpret those symbols. This suggests that, even if an elitist heritage is presented as 'official' by a dominant power as being universal, disinherited social groups can subvert such an interpretation by appropriating the symbols of that heritage to "demand political rights" (Bodnar

1992, 15). Bodnar argues that in American culture, patriotic language and symbolism contribute to both official and vernacular interests, but that the official version usually dominates (Bodnar 1992, 18).

Heritage, landscape, and identity are inextricably linked when we examine places that symbolize a national heritage, like the National Mall. When the social conflict implicit in the selection and interpretation of heritage takes place in landscape, we have a physical record of how hegemonic power has been used to include, or exclude, social groups based on an official collective identity; that is, the symbols of heritage on the National Mall provide us with an account of whose heritage has been represented in built form throughout the history of the nation. We can determine which social groups are dominant by identifying the presence or absence of their representation, in built form, on the Mall.

The Importance of National Heritage & Identity

National identity is critical to the perpetuation of nation-states. It is this identity that legitimizes the nation and enables its institutions to lay claim to territory. In considering the question of national identity, it is important to distinguish between those national identities that stem from shared religion or ethnicity, and those that stem from governmental structures and shared institutions. Graham, Ashworth, and Tunbridge distinguish these types of nationalism as "ethnic nationalism" and "civic nationalism" (2000, 62). A good example of ethnic nationalism can be found in Israel. Because the nation of Israel identifies itself along ethno-religious lines, it has been able to lay claim to historic territory it no longer physically holds, as well as 'nationals' who reside outside the nation's territory. Civic nationalism, on the other hand, stems from shared government and institutions rather than "organic notions of identity" (Graham, Ashworth, and Tunbridge 2000, 62). This thesis focuses on the national heritage of the United States as

represented on the National Mall. Therefore the nationalism discussed here will be 'civic nationalism.' As a pluralistic society, Americans hold many different kinds of identities, from ethnic identity to sexual identity; therefore it is our shared institutions and system of government that define who an American 'national' is, rather than shared religion or ethnicity.

Graham, Ashworth, and Tunbridge (2000) identify three functions of heritage as it relates to nationalism. These functions necessarily occur consecutively in the building of a national identity. First the nation is recognized as distinct from other nations, thereby identifying and 'naming' the nation. Secondly, the nation establishes its dominion over its claimed territory and "absorbs or neutralizes potentially competing heritages of social-cultural groups or regions" (Graham, Ashworth, and Tunbridge 2000, 183). Lastly, the nation uses heritage to control diversity within the "national narrative" (Graham, Ashworth, and Tunbridge 2000, 187).

The idea of a 'narrative' here is an important one. As Graham, Ashworth, and Tunbridge argue, nationalistic heritage is often presented as a story, with a clear beginning somewhere in the distant past and a linear, progressive continuity of events that "lead directly to the contemporary nexus of power, providing the precedents and traditions which underpin the legitimacy of that authority" (Graham, Ashworth, and Tunbridge 2000, 56; Ashworth 1994, 14). Bourdieu agrees, arguing that this narrative storyline is in fact the only way for a dominant culture to appear legitimate (Jenkins 1992, 105). This selective national narrative does not stop in the present. The linear trajectory of heritage is also projected into an imagined future where the legitimacy and primacy of the nation is sustained. It is also important to understand that 'forgetting' some elements of the past is just as important as remembering others (Graham, Ashworth, and Tunbridge 2000, 60). Historically, nationalistic heritage that tended to be remembered promoted ideas and stories that minimized differences amongst a diverse population

and presented an image of wholeness or oneness. More recently, however, this assertion of homogeneity has become less true, as will be discussed later in this chapter.

The first function of national heritage, or 'naming' the nation, relates directly to the idea that nations are imagined phenomenon. There is no line physically drawn on the ground that separates one nation from another. Rather, it is the shared history and national identity that defines who a 'national' is. Thus, not only is heritage concerned with legitimizing a nation's claim to territory, it also is a "means by which such groups are made aware that they exist at all" (Graham, Ashworth, and Tunbridge 2000, 188). Ashworth, in his essay on heritage and identity, uses Bourdieu's concept of 'cultural capital' to explain this point. Cultural capitol can be understood as the sum cultural output of a society, as well as the "criteria of taste" (Ashworth 1994, 20) by which those outputs are evaluated and selected. The ruling class must appropriate and use this capital to legitimize their assumption of power and authority over a place (Ashworth 1994, 20). This act can be seen as the first essential step in creating a national identity. "No national heritage can be shaped until there is a named group of people with whom it can be associated" (Graham, Ashworth, and Tunbridge 2000, 187).

The second function of national heritage, the establishment of the primacy of the nation over its territory is critical to understanding the role of national identity. Eric Hobsbawm, a sociologist, has theorized that traditions, such as standing up for the National Anthem, are invented and encouraged to establish "emotionally and symbolically charged signs of club membership rather than the statutes and objects of the club" (Hobsbawm 1990a, 11). Through symbolism and ritual, the dominance of an imagined culture is communicated. Graham, Ashworth, and Tunbridge, argue that in order to create a universal national identity, by means of a linear national narrative, variations and inconsistencies within the national history need to be

suppressed (2000, 188-189). Graham, in his essay on geography and identity, points out that the "imagined community [of the nation] depended on tropes of cultural exclusivity" (Graham 2000, 76). In deciding whose heritage is represented, political power is exercised, and some social groups are inevitably left out (Graham, Ashworth, and Tunbridge 2000, 30). In the case of America, a nation of many different social and immigrant groups, a dominant national identity is promoted to immigrant groups through the almost-compulsory celebration of the official heritage of the nation (Hobsbawm 1990b, 279-280). Lowenthal describes heritage as "created to generate and protect group interests, [and] it benefits us only if withheld from others" (1996, 128). By intentionally 'misreading' the past to create an exclusive heritage, dominant groups can establish themselves and reproduce "the conditions of their own existence" (Jenkins 1992, 109) through built symbolism. Sometimes, misrepresentations of homogeneity in the national narrative have violent outcomes when those who are not represented, or "do not fit" the national identity, are driven out of the nation's territory or exterminated through genocide (Graham, Ashworth, and Tunbridge 2000, 55).

The third function of national heritage, controlling or managing the national narrative, allows nations to modify the narrative as less dominant social groups gain more political power. Having already defined the nation and established its dominance over its territory, heritage may then begin to grant variations in the national narrative (Graham, Ashworth, and Tunbridge 2000, 189). In pluralistic societies, like the United States, it is important to absorb the identities of different social groups into the national narrative so as to minimize dissent through inclusion rather than disenfranchisement. Hobsbawm points out that Americans adopt the traditions and holidays of its immigrant groups, such as St. Patrick's Day, in addition to politically socializing those same groups through symbolic domination (1990b, 280). This has become particularly

important in the post-colonial world, where disinherited and non-dominant groups have been revalued and retrofitted into the national narrative. This newer, more inclusive, view of national heritage has also allowed nations to acknowledge mistakes and injustices of the past, and to remember what had been forgotten in the name of universalizing a civic heritage.

In addition to the three functions of heritage proposed by Graham, Ashworth, and Tunbridge, this thesis proposes that national heritage serves a fourth function of equal importance. National heritage must project itself into the future, so that its citizens feel protective of its institutions and values enough to sacrifice for the sake of future generations. These sacrifices come in many forms, some manifest in armed conflict with other nations, some in limiting freedom of action, and others in proactive work to sustain cultural and natural systems. When heritage projects itself into the future, there is an implicit sense of obligation to the needs of future people. This function of heritage will be explored together with the concept of sustainability in Chapter 4.

These four functions can be seen in the purposeful manipulation of the National Mall. This landscape may be seen as an allegory, which serves to display the official heritage of the United States, legitimize its claim over territory, and convey a collective memory of the past. The formal expression of this selected official heritage validates contemporary power structures "by conveying an idea of timeless values and unbroken lineages and through restoring lost or subverted values" (Graham, Ashworth, and Tunbridge 2000, 40). It achieves this by invoking national myth and personalities to promote a national identity (Figure 2.1). Most sites representing official national heritage are ceremonial in nature, usually urban, and expressive of collective national identity. The National Mall, however, is more than just a single site. It is an entire landscape composed of many different sites and memorials in which the entire national

narrative is represented. This American national narrative has evolved within the limited confines of the National Mall to promote, not only our dominance over the continent and our universal traits and achievements; but, more recently, has come to include stories of national injustices and mistakes (see Chapter 3).

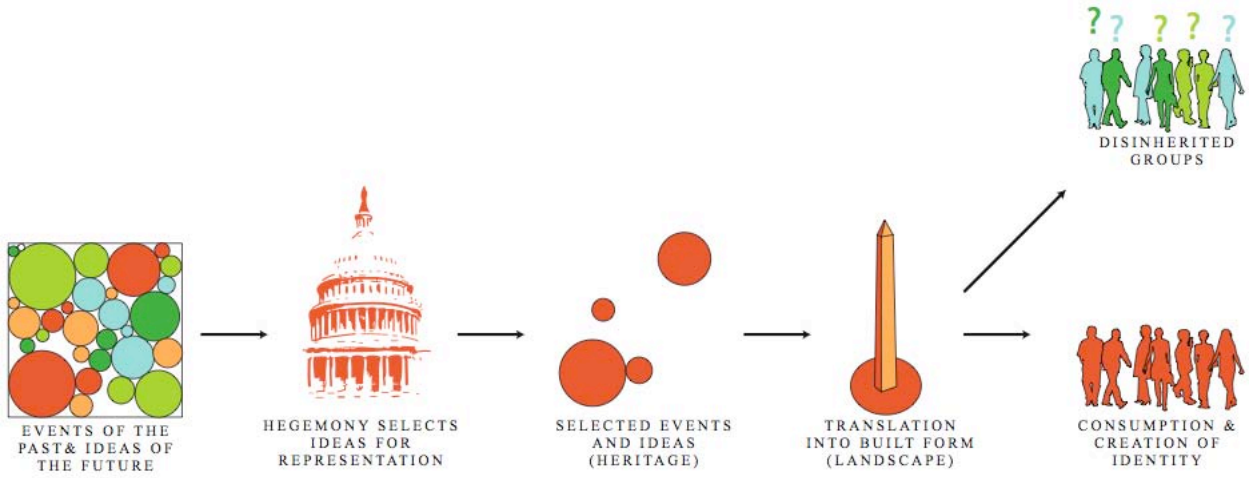


Figure 2.1— The process of heritage production and representation in landscape. This figure represents the process of heritage selection and representation in the landscape where it is consumed and incorporated into the national identity. The decision of whose heritage to represent disinherits some populations, leaving them less able to access the ideas represented in the landscape. Diagram by the author.

Public Landscape and Contested Heritage

Landscapes that promulgate collective national identity and heritage are further complicated when a plurality of the public has access to them and can exercise a degree of control over them. Of course, landscapes that symbolize national heritage must be available for public consumption in order to nurture a collective national identity. The ways in which the public uses the landscape, however, can effect how that heritage is interpreted and may subvert the intended political effect of that heritage by appropriating its symbols and using them for

other social purposes. Public space itself is not shaped just for passive consumption by hegemonic powers; it is also shaped by the public and has the power to force political change.

Don Mitchell, Distinguished Professor of Geography at Syracuse University, has attempted to define public space and has presented two very different interpretations of what public space means. On one hand, public space is the Greek *agora*, essentially political, where democratic and revolutionary ideas can be shared, tested, and expanded into other forums. On the other hand, public space is the deliberately shaped theatre where a well-behaved, appropriate public is permitted to enter and "experience the spectacle of the city" (Mitchell 1995, 115). This division of purpose is typical of any public space. On one side, there are forces that seek to use public space to represent a hegemonic point of view in a bid to encourage consumption and subdue opposition. However, there are always other forces that seek to oppose those in control who use public space to voice that opposition in a bid for recognition or more political power. This dichotomy supports the argument that public space can both give shape to and be shaped by public opinions and values.

The public may participate in the creation and consumption of heritage landscapes in two ways, which are related to the ways in which identity is created. Passive participation in the consumption of national heritage suggests participants engage the symbols in the landscape and assimilate or resist them in the creation of their personal identity. Active participation suggests a politically charged opposition to established centers of power and the 'taking' of physical space to represent this dissent. Mitchell, drawing from Lefebvre, argues that most public spaces begin as "representations of space," which are ordered and governed, but are transformed to "representational space," which are functional and occupied by the public, as they are used over

time (Mitchell 1995, 115). These ideas are also similar to Bodnar's concepts of 'official' versus 'vernacular' interpretations of the past.

Mitchell also distinguishes 'public space' from the 'public sphere,' the first being physical and the second abstract. Both may be considered arenas for public discussion and dissent, but Mitchell maintains the importance of taking and holding material public space in challenges to hegemonic power, in spite of the growing influence of electronic and social media on public discourse (1995, 117). Mitchell illustrates his point by pointing to the political demonstrations in Tiananmen Square. Though the protests were organized and promoted in the public sphere of universities, they gained prominence and became a threat to hegemonic powers by taking control of highly symbolic physical space. A more recent example illustrating this concept is the popular uprising in Egypt, which occurred in early 2011. Though organized in the public *sphere* of online social media, the protestors made themselves visible by taking Tahrir Square, a large public space in downtown Cairo. Had the demonstrations been denied access to material public space through martial force, they would have remained invisible and probably would not have been able to accomplish the demise of the entrenched ruling party.

In a pluralistic and multicultural democratic society like the United States, the opposition appropriates public space as a matter of course. The National Mall is one of the most important venues for challenging national power structures, as well as being the most recognized forum for legitimizing those same power structures through the consumption of built symbols of national heritage. This tension between maintaining control over heritage space, and the appropriation of heritage space for free political and subversive public discourse constantly re-creates America's national heritage as disinherited or minority groups march on Washington in a bid for political recognition (Figure 2.2).

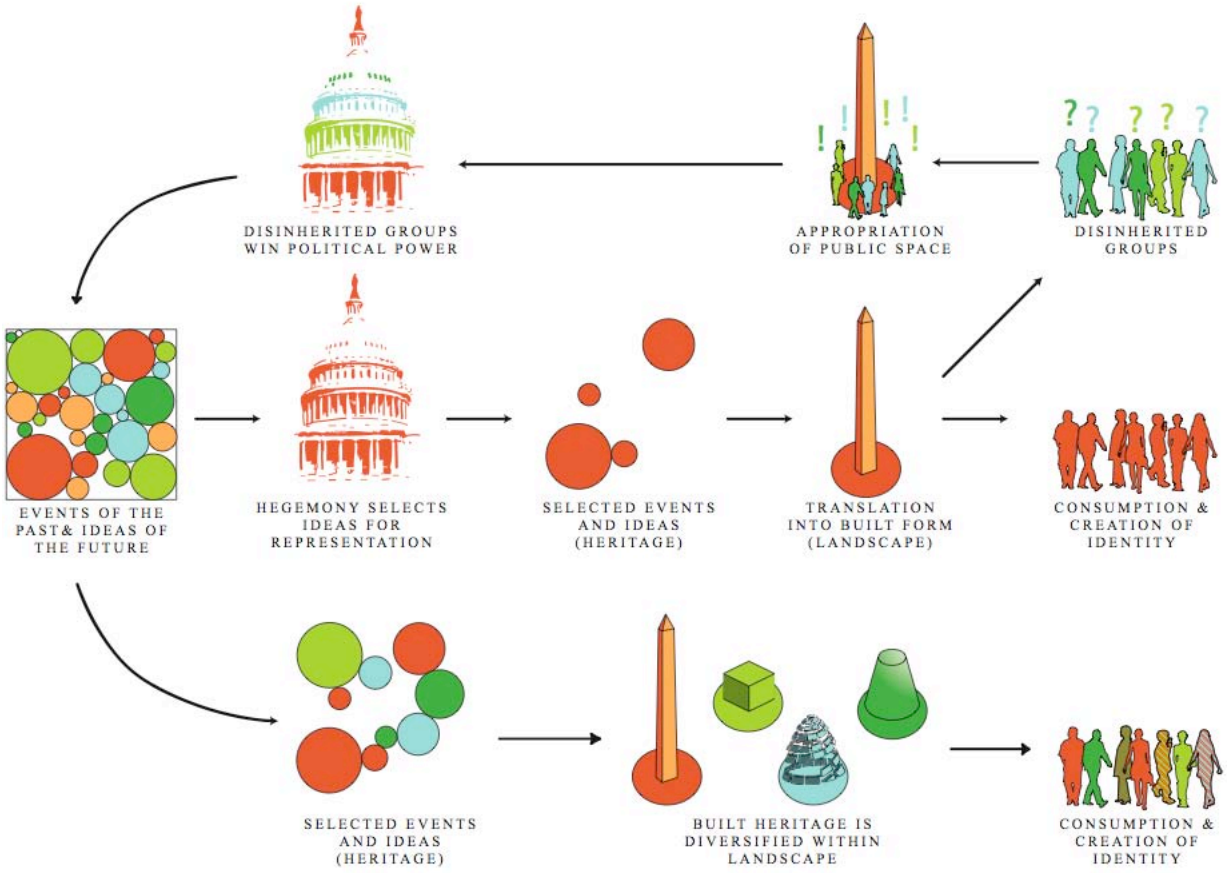


Figure 2.2— The response of disinherited groups in public landscapes. By appropriating the symbolism of the dominant class, disinherited groups win political power, allowing them to reinterpret the past and diversify the built heritage in landscape. This leads to more inclusive and layered national identities. Diagram by the author.

Conclusion

National heritage plays four roles in the creation of national identity in this thesis. Briefly, they are (1) to 'name' the nation, (2) to establish the dominance of that nation, (3) to manage the national narrative through diversification, and (4) to project the national narrative onto the future. These functions depend on the public to interact with national heritage by absorbing it or rejecting it in the creation of their personal identities. Landscape is an effective venue for this kind of interaction, and it has been used as such in many places. However,

opening heritage up to public consumption through landscape also opens up the possibility of public challenges to that heritage. Public landscapes are natural forums for conflict over heritage and identity. At the national scale, heritage landscapes seek to nurture an overriding national identity that legitimizes the present power structures through symbolic idealization of a selected past. This symbolic narrative tends to minimize contradictions and disenfranchised social groups and regions in favor of a linear trajectory that promotes a singular national identity. However, in a post-colonial world, in which there is a demand for a more inclusive, nuanced, and heterogeneous view of heritage, these symbols of hegemonic power are often seized and appropriated by resistance movements in a bid for political recognition at the national level. Nowhere in the United States is this more apparent than in the National Mall, where a constant struggle over control of the space is apparent in a steady flow of demonstration marches. As these resistance groups gain political recognition and are absorbed into the hegemony, they gain symbolic recognition in built form on the Mall, legitimized in the same landscape where before they were dissenters.

This theoretical framework of national heritage and public space will now be applied to an interpretive history of the National Mall to reveal the cultural meanings implicit in its built forms and spatial arrangement. This history will develop a place-based context within which the USDA hopes to build its garden.

CHAPTER 3

THE NATIONAL MALL AND SYMBOLIC HERITAGE

Introduction

With the framework for discussing national heritage in place, we can now apply this theory to the landscape of the National Mall. This chapter will interpret the evolution of the National Mall from its conception to today, using the body of theory on heritage, landscape, and identity discussed in Chapter 2 to frame the several movements and purposes which shaped its various forms and functions. This historical analysis will ground the complexities of the National Mall in an established body of theory, and reveal cultural meaning, norms, and public expectations implicit in the forms and functions of this landscape. Together, these form the context within which the USDA can build its new sustainability garden.

Throughout its development, the National Mall has responded to subsequent national political priorities, both in its built forms and public uses. These priorities can be directly linked to the four functions of national heritage outlined in the Chapter 2: (1) to "name" the nation, (2) to establish the dominance of the nation over its territory, (3) to control the national narrative, and (4) to project that heritage into the future. At each stage of the Mall's evolution, the built national heritage has served these functions.

L'Enfant's Plan, 1791

The idea for a capital city under federal jurisdiction was a response to the need of the new national government to secure its position within a federation of largely independent states. The Pennsylvania Mutiny of 1783, in which unpaid soldiers of the Revolutionary War threatened

violence to Congress to secure promised wages, acted as a catalyst for the national government to procure a district under federal control. When the Pennsylvania state government refused to protect Congress from the disgruntled soldiers, Congress relocated to Maryland, but realized the need for a federal district within which the government could operate free from the caprices of state government. The protests and threats of violence in the Pennsylvania Mutiny made real the need for a district under federal control to ensure safe operations of the national government (Scott 1991a, 37; Green 1962, 10-11).

When Pierre Charles L'Enfant, a French-born architect and engineer who had fought in the American Revolution, was appointed by George Washington to design the new federal district in 1790, Washington, DC was little more than a collection of farms (Figure 3.1). Pamela Scott, an architectural historian specializing in Washington, DC, interprets the symbolism in L'Enfant's design as emblematic of the balance of powers explicitly outlined in the United States Constitution, as well as representative of the European origins of new nation (1991a) (Figure 3.2). Firstly, the balance of powers is symbolized in the plan through the arrangement of its functional parts. The ceremonial center of the capital consists of a broad east-west avenue flanked by gardens and buildings, which L'Enfant called the 'Mall' (Figure 3.3). The Capitol building, the President's Mansion and the Washington Monument are axially balanced in the composition of the Mall, each separated by broad linear open space, symbolizing both the separation and balance of powers. However, the Capitol dominates the hierarchy of importance in the plan, due to its position at the terminus of the longer East-West axis as well as its site—the topographical prominence, now known as Capitol Hill. Secondly, the United State's European origins are symbolized in the distinctly Baroque framework of the plan. With its "widely-spaced

nodes," strong axial patterns, and "triangular conjunctions" (Scott 1991a, 43), the plan celebrates the European colonial order, thereby signaling the new nation as the heir of Western civilization..

The Mall itself was described in an anonymous essay, published in February of 1795, as the center of city life, a grand boulevard that would house important public figures, as well as provide economic and cultural resources for the citizenry. Envisioned as a grand boulevard, this space was designed to be both public and economic in nature; providing space for much-needed commercial activity in the newborn city and a place for impressing the grandeur and power of the nation to her citizens (Scott 1991b, 108). These physical features enshrine in built form the core principles of the separation of powers described in the United States Constitution, define the nation's founding principles, and for the first time codify the young nation's European heritage in built form.

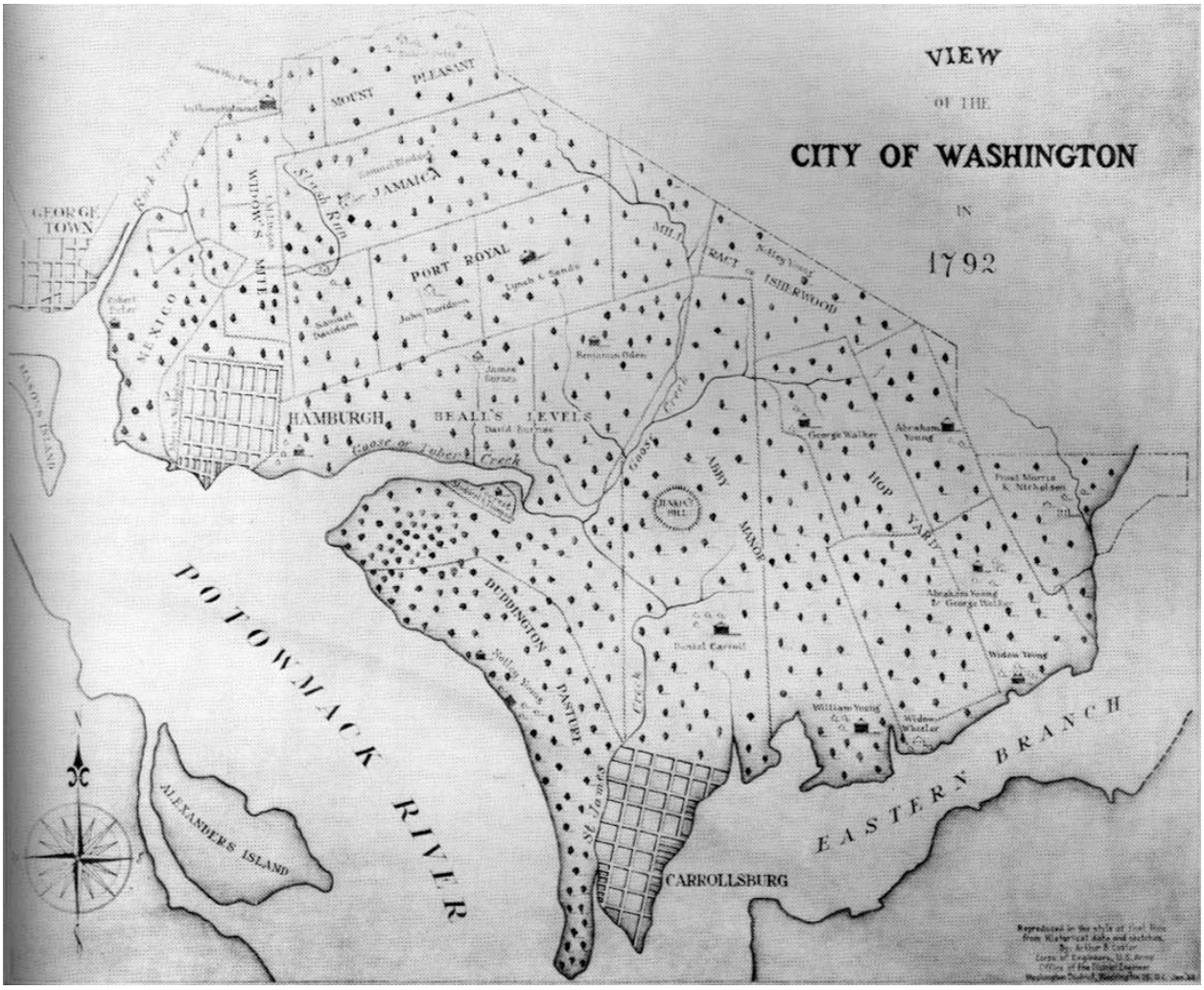


Figure 3.1—*Plan of the City of Washington as it appeared in 1792*, The prominence known as Jenkins Hill would later be called Capitol Hill. Plan reproduced by Arthur B. Cutter, US Army Corps of Engineers, 1952 (National Archives)

Figure 3.2—Andrew Ellicott's Engraving of the L'Enfant Plan, 1791 (U.S. National Capital Planning Commission)

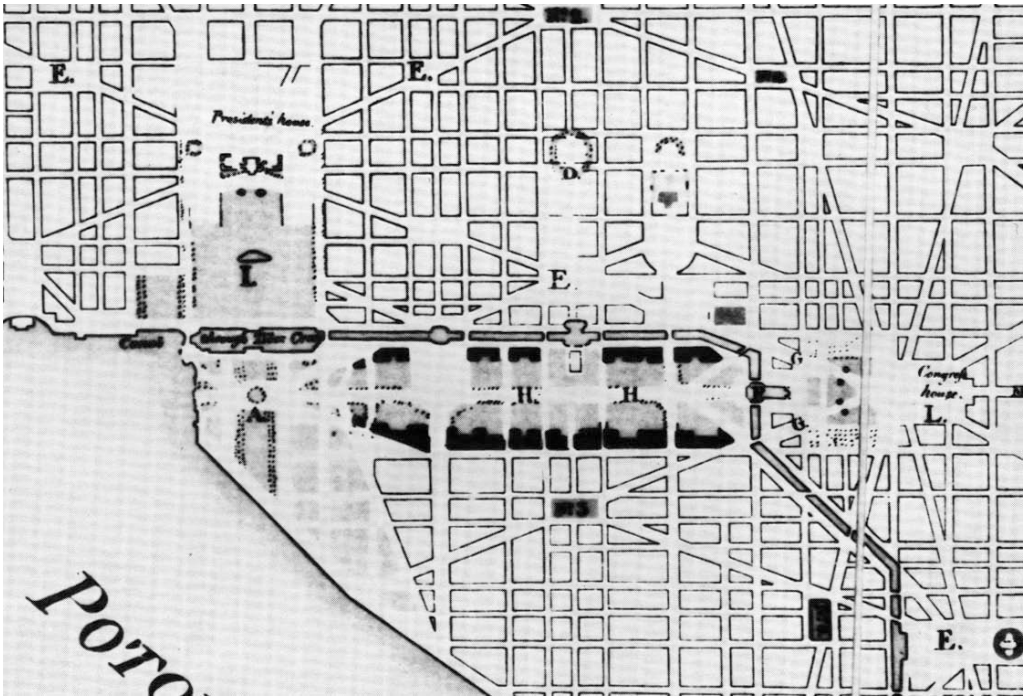


Figure 3.3—Detail of the Mall, *Plan of the City intended for the Permanent Seat of the United States*, attributed to Pierre Charles L'Enfant, 1791 (Library of Congress)

The expansive nature of L'Enfant's plan also reflects foresight into the future economic and symbolic importance of the city. For L'Enfant to cast his vision so far into the future at a time when the area was mostly comprised of farms exceeded any reasonable expectation of what the city might become (Scott 1991a, 39). No one else had the boldness to design such an expansive vision, but it was L'Enfant's belief that this city would someday rule over the entire continent. In this way, L'Enfant used his design to project a vision onto the city. By setting expectations for the seat of the new government high, L'Enfant's design codifies expansive growth and westward expansion into the design of the federal city (Scott 1991a, 42).

Work quickly began on two of the fundamental structures of the plan—the Capitol and the President's Mansion. These two structures set up the primary spatial relationship around which the city would grow. Thus, the first step toward realizing L'Enfant's vision for the Mall was taken. Aside from these essential structures, however, Congress took little action to make

the other improvements dictated in L'Enfant's plan. The lack of a local economic base from which to draw taxes made it very difficult to pay for development in the Federal District, and there was a fundamental unwillingness on the part of Congress to use national tax dollars to fund what were seen as local improvements. Also, the most valuable land lay under government ownership, making it tax-exempt. Though L'Enfant had envisioned a city to impress the nation and the world, Congress saw only local interests at stake in the improvement of Washington, DC (Green 1962). Thus the Mall remained largely ignored for the first half of the nineteeth century, while Washington built up an economic base sufficient for city improvements. When the plan for Washington was finalized and transferred to the city commissioners in 1797, the Mall's stated purpose was "for the health and ornament of the city," (Scott 1991a, 46) but this vision waited forty years before the next generation of visionaries for the Mall began to make this vision a reality.

In L'Enfant's bold design for the federal city, several functions of heritage are at work. The first step in forming a national heritage is establishing control over a territory. The federal government accomplished this by moving the national capital beyond any state jurisdiction, thereby designating its institutions as separate from and superior to those of the federated states. We also see the first function of national heritage at work, that is, to "name" the nation. L'Enfant deftly codified a new civic nationalism in the form of the city through the spatial arrangement of the new political institutions, which were positioned and balanced to evoke the structure of the government described in the Constitution. This civic nationalism, which we defined earlier as a nationalism that stems from governmental structures and shared institutions, marks the 'naming' of the nation in built form. The design also describes the dominant class of nationals as European in descent. By neglecting Native American and African city planning

traditions, L'Enfant formalized a European hegemony on the continent. Though Europeans, Native Americans and people of African descent occupied the territory claimed by the United States, only the European model is reflected in L'Enfant's plan. This established the United States as the heir to Western civilization, formally disinheriting those of non-European descent.

Pre-Civil War, 1840-1860

In the decades leading up to the Civil War, a host of national issues influenced the development of the National Mall. The institution of slavery was driving a wedge between the northern and southern states, sparking debates on the meaning of the country's founding principles and weakening the federation. Interest in museums and public education grew in intellectual circles as a moral imperative for the advancement of civilization and the perpetuation of democracy. Washington, DC's population also doubled between 1840 and 1860, providing an economic tax base to pay for improvements as well as a citizenry who demanded livable conditions (O'Malley 1991, 61). The National Mall became a place to address each of those contemporary concerns. It became a stage upon which the national government promoted a shared heritage of unity and a "strong federal identity" (O'Malley 1991, 63) in built form.

If L'Enfant had intended the Mall to be a commercial center as well as a ceremonial core, his wish for economic activity was granted by the presence of one of the most visible and loathsome slave markets in the world. According to John Randoph, a slave owner and Congressman from Virginia, "[i]n no part of the earth, not even excepting the rivers on the Coast of Africa, was there so great, so infamous a slave market, as in the metropolis, in the seat of government of this nation, which prides itself on freedom" (Bryan 1906, 202). The "parade of the manacled slaves" (Bryan 1906, 206) was a common sight on the Mall owing to the two prominent slave pens directly adjacent to its southern border (Clephane 1900). This nefarious

practice, occurring so close to the Capitol building and in the symbolic center of the city, became a subject of debate in the United States Congress. In 1850, Congress passed the Compromise Act, outlawing slave trading in the District of Columbia, but allowing slave ownership to continue. In so doing, the federal government chose to assume a position of neutrality in the slavery debate, and, although the practice of slave ownership continued, the slave trade was removed from the National Mall (O'Malley 1991, 62).

In 1826, James Smithson, a British scientist, bequeathed his sizeable fortune to the United States to establish an institution "for the increase and diffusion of knowledge among men" (Rhees 1901, 6). This bequest set in motion the formation of one of the most influential voices on the Mall, the Smithsonian Institution, and established public education as one of the primary functions of the ceremonial core. Because of its national scope, its founders hoped that it would provide a force for unity, as it would promote learning on the national scale. In a letter written in 1843, Colonel John James Abert, one of the founders of the National Institute of Science, described the Smithsonian as an organization,

> which all parties could befriend… because it aided and elevated the National character, and because it would furnish a broad platform of National feeling, upon which all parties, all sects, all conditions of life could, on principles cherished by all, meet and unite in erecting a temple to National fame. (Langley 1901, 129)

In addition to the founding of the Smithsonian, an interest in botanical education, agricultural experimentation, and recreation through public gardens was also promoted (O'Malley 1991, 63). Dr. Edward Cutbush, founder of The Columbian Institute for the Promotion of Arts and Sciences, had advocated for a National Botanic Garden several years earlier. He believed that public botanical gardens would encourage the growth of gardening in Washington, DC and influence a moral effect on society. These gardens, it was hoped, would improve Washington's reputation as an undeveloped city by encouraging her citizens to

participate in civic beautification (Scott 1991a, 46). This, in turn would promote the healthful benefits of gardening to a national audience.

As another part of the push to nurture strong national identity, Robert Mills, a respected architect, was commissioned to design the Washington Monument in 1845. Instead of the equestrian statue called-for by L'Enfant, Mills designed a massive and elaborate monument, symbolic of the stature of America's first President (Figure 3.4). The monument, intended to be Washington's tomb, towered 600 feet high and was surrounded by a round colonnade. Its symbolism spoke to the importance of the national union, with 30 columns representing all of the states. Pamela Scott posits that the construction of the Smithsonian Institution and the Washington Monument in the mid-nineteenth century served to promote values of national unity, but approached the issue from two different directions. The Smithsonian Institute expressed the plurality of American society, while the Washington Monument expressed the history and ideals of the Revolution (Scott 1991a, 50-53).

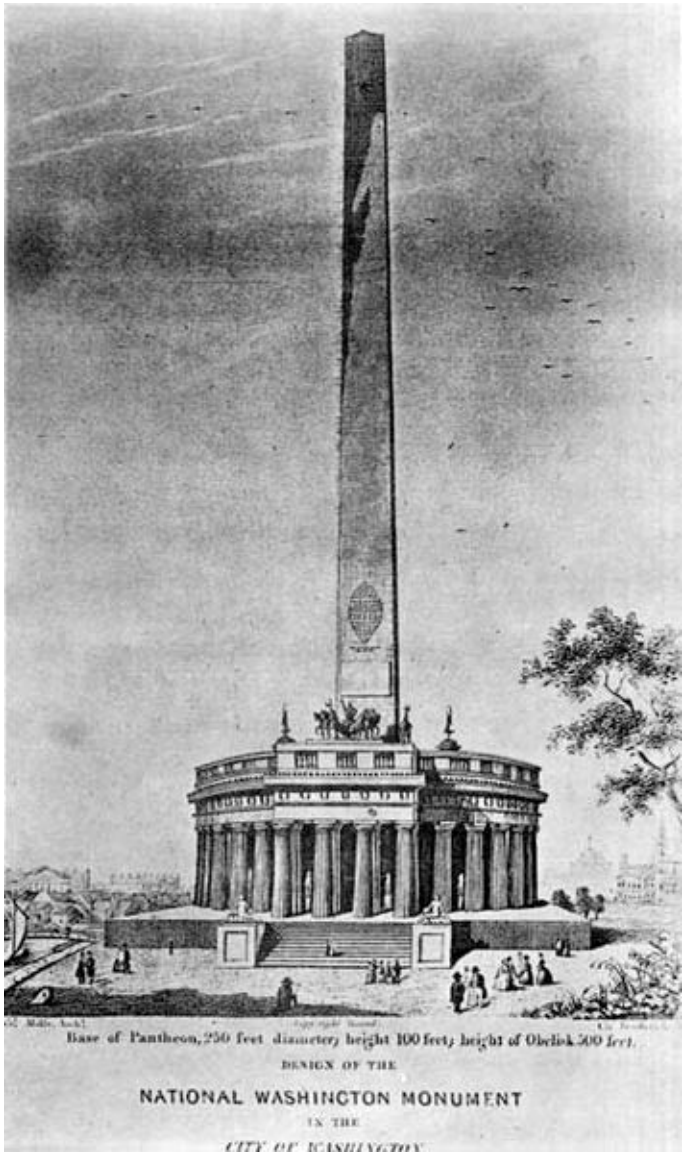


Figure 3.4—National Washington Monument designed by Robert Mills, lithograph by Charles Fenderich (Library of Congress)

Also during this time period, Andrew Jackson Downing was commissioned to design the grounds of the entire Mall under the direction of the Smithsonian Institution (Figure 3.5). Again, the educational values of this landscape were emphasized in Downing's plan. His purpose was, in part, to create "a national park which would be an ornament to the Capital of the United

States," to "give an example of the natural style of landscape gardening which may have an influence on the general taste of the Country," and to "form a collection of all the trees that will grow in the climate of Washington" (O'Malley 1991, 66). His approach to creating the picturesque landscape was both an indicator of his values in rural, agrarian economics and American democracy. Downing was a firm believer that education, botanical education in particular, held the key to a true Democracy, in which each citizen was educated so that he could fully participate in the democratic system. In his *Rural Essays*, Downing's call to "build halls where knowledge shall be freely diffused among men…plant spacious parks…and unloose their gates as wide as the gates of morning to the whole people" was meant to "banish the plague spots of democracy" (1856, 152). This was an important conceptual supplement to the formation of the Mall. Not only would the Mall be a ceremonial core of civic consumption, but it would also be a public park intended to benefit individual citizens through participation. Unfortunately, owing to Downing's untimely death and the commencement of the Civil War, his vision was not fully realized. His plan, however, did impress the naturalistic style of picturesque gardens on the Mall, a departure from L'Enfant's vision for a broad avenue; and was a style that dominated the Mall for the next seventy years. Without an advocate for Downing's plan, the Mall devolved into a patchwork of different gardens without a single vision to unify it (O'Malley 1991, 72).

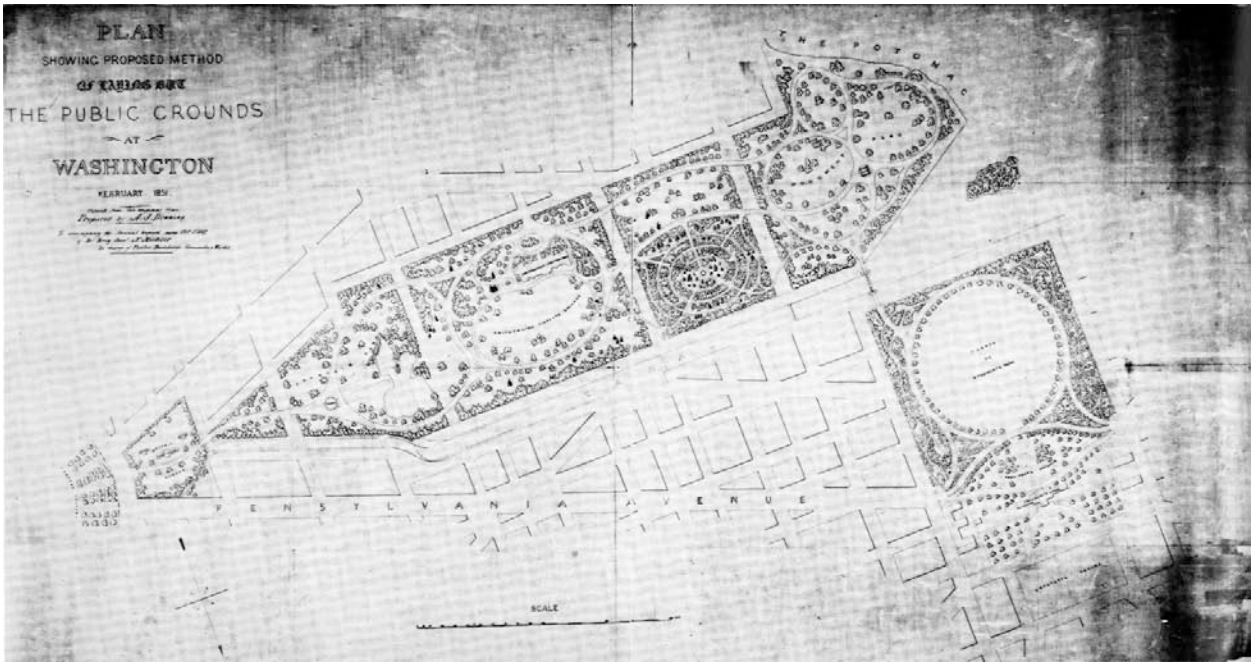


Figure 3.5—*Plan Showing Proposed Method of Laying Out the Public Grounds at Washington*, Andrew Jackson Downing, 1851 (National Archives)

Nearly sixty years after the founding of Washington, DC as the nation's capital, the second function of national heritage, which is to establish the dominion of the nation over its claimed territory, became manifest in physical form. At a time when the power of the federal government was threatened by secessionist movements and calls for increased autonomy of the states, the built heritage on the Mall was intended to subdue dissent by rooting the national identity in the struggle for independence from England, symbolically represented by the Washington Monument. This was a heritage shared by all of the states, and so could be projected on the entire union. The symbolic presence of slave pens on the Mall also continued the disinheritance of non-dominant social groups. The shocking notoriety of the slave trade on the Mall during this time certainly broadcast the dominance of European Americans over those of African descent, though this dominance was not just promulgated through symbolism; it was imposed through law and martial force.

As the Mall continued to develop as a place where a collective national identity could be forged through built symbols of heritage, another force began its work. For the first time the space was thought of as an incubator of democracy through the participation of its citizens. Both the arrival of the Smithsonian Institution and the creation of Downing's plan began to create the Mall as a public educational space, where citizens could come to learn and thus better participate in democratic society. Although not fully developed, this notion of public participation in statehood through interaction with a national landscape put the National Mall on the path to becoming the arena for public discussion and dissent that it is today.

The McMillan Plan, 1901-1933

The next major design shift in the Mall's history sprang out of the City Beautiful Movement at the turn of the twentieth century. The McMillan Plan of 1901 has remained the most important contributor to the Mall's character aside from the L'Enfant Plan of 1791. Between 1840 and 1900, the population of the United States tripled, and cities quickly outgrew their infrastructure. The Columbian World Exposition in Chicago attempted to answer the question of how to deal with these "almost 'instant' cities" to improve the lives of their citizens (Hines 1991, 81). Looking to Europe for comparison, American writers and journalists, such as Ida Tarbell, Henry James, and Lincoln Steffens, were embarrassed at the state of American cities when compared with the broad avenues and classical architecture of European cities (Hines 1991, 80). They saw the United States as the heir apparent of Western civilization and thought the forms of the Old World should be used in our cities to reinforce this inheritance.

The City Beautiful movement coincided with the rise of the Progressive movement, which was broadly concerned with social issues such as child labor. Unlike the Progressive movement, which sought change through political channels, the City Beautiful sought to improve

social conditions through aesthetics. There was a firm belief that environmental conditions had an effect on quality of life. It was therefore necessary to implement large-scale changes to the fabric of the city to make them more livable and to improve social conditions (Hines 1991, 85).

The City Beautiful found its fullest expression in the Columbian World Expo of 1893. Though temporary in nature, the Worlds Fair was a demonstration of possibility for what American cities *could* be. Because the Fair was so well attended by a large portion of the population, its ideas spread throughout the country. It's principle architects embraced Old World classicism to create a 'Great White City,' which would become the model for many urban beautification projects, including the National Mall in Washington (Hines 1991, 81-85).

Calls for the unification and improvement of the National Mall had been circulating for years. Frederick Law Olmsted, when called upon to redesign the Capitol grounds in 1874 criticized the Mall for being "arranged in an absurd and wasteful way" (Streatfield 1991, 119). Though he called for a commission to subordinate the Mall's diverse patterns to a single vision, funding fell short, and the senior Olmsted was obliged to limit his scope to the Capitol grounds. Another such call for improvement came from William Saunders, a landscape gardener and groundskeeper for the Agricultural Propagation Garden on the Mall. He described his vision for the Mall in Sloan's Architectural Review in 1864.

> The grandeur of long, straight avenues, and the splendor of their vistas must always arrest attention. The elements that produce sublimity in a scene are *repetition* and *continuity*: and these are developed in properly planted avenues. Let such an avenue be constructed from the Capitol to the Potomac river, taking the National [Washington] Monument as a central point in the view. Let this avenue be planted on its margins with that beautiful, unique, and appropriate tree, the Tulip Poplar, *Liriodendron tulipifera*, leaving a clear vista three hundred feet in width; and an effect would be produced of great scenic grandeur if not of sublimity. (Saunders 1899, emphasis in original)

Though he managed and developed one of the largest gardens on the Mall in the nineteenth century, Saunders recognized the need for a stronger visual corridor. Writing in his journal in

1899, Saunders comes close to the vision promoted by the McMillan Commission two years later.

> I cannot imagine a grander or more impressive scene than a wide stretch of grass continues from the Capitol to the National Monument bordered with towering trees; but I am sure now that such a vista will never be constructed. (Saunders 1899)

Though the intellectual community saw the benefit and need for a unified vision, Congress lacked the will to fund such a project.

In 1900, the American Institute of Architects (AIA) held a conference in Washington where Frederick Law Olmsted, Jr. addressed the question of a unified plan. In a speech to the AIA, he asserted that:

> The axis of the Capitol should neither be ignored by the use of a wiggling road and confused informal planting, nor should it by marked by a mere commonplace boulevard, but by an impressively broad and simple space of turf, with strong flanking masses of foliage and architecture and shaded driveways. (Streatfield 1991, 122)

During the convention, the AIA formed a committee to lobby Congress to form a professional commission to address the condition of the Mall. It was hoped that the one hundred year anniversary of the seat of government moving to Washington, DC would give the project a national importance that would inspire politicians to supply funds (Moore 1902, 9-10; Streatfield 1991, 121-122).

The architectural community found a friend in Senator James McMillan of Michigan. Though the House of Representative refused to allocate funds for such a project, Senator McMillan secured funding from the Senate's own budget to support an architectural commission. Seizing the opportunity to unify the landscape of the Mall under the tenets of the City Beautiful, McMillan hired the architects of the Columbian World Expo to replan the Mall: Daniel Burnham, Frederick Law Olmsted, Jr., Charles McKim, and Augustus Saint-Gaudens, all leading figures in the planning and execution of the Columbian Exposition, with the exception of

Olmsted, Jr., whose father had supplied the vision for the Exposition's landscape. Charles Moore, McMillan's secretary was assigned to act as the commission's secretary, and he contributed much to the commission's final reports and recommendations (Hines 1991, 86; Streatfield 1991, 122).

The McMillan Plan, as the commission's work came to be known, reclaimed the original intention of L'Enfant and reestablished the Mall as the center of political and cultural life in the city (Hines 1991, 123). Adapting a uniform neoclassical approach, strongly restoring the axial relationships between the Capitol and the Washington Monument with a wide swath of lawn, and extending the axes westward into the newly-created Potomac Flats and southward into the Tidal Basin, the planners recognized the importance of, "noble architecture and sensitive urban design [as] essential components of a healthy environment" (Hines 1991, 97) (Figure 3.7). The plan discarded the picturesque, Victorian quality that the Mall had embraced for the previous 100 years, replacing it with a strictly classical architectural vocabulary on an imperial scale, evoking the power and authority of the federal government, and symbolically crowning Washington the heir of Western culture and values. The McMillan Plan's "open invocation of imperial grandeur" became a symbol of America's growing technological and military power (Wilson 1991, 151). The expansion of the axis westward, as well as the decision to terminate it with the Lincoln Memorial signified the end of westward expansion and a maturation of the United States (Stern 1991, 263-264).

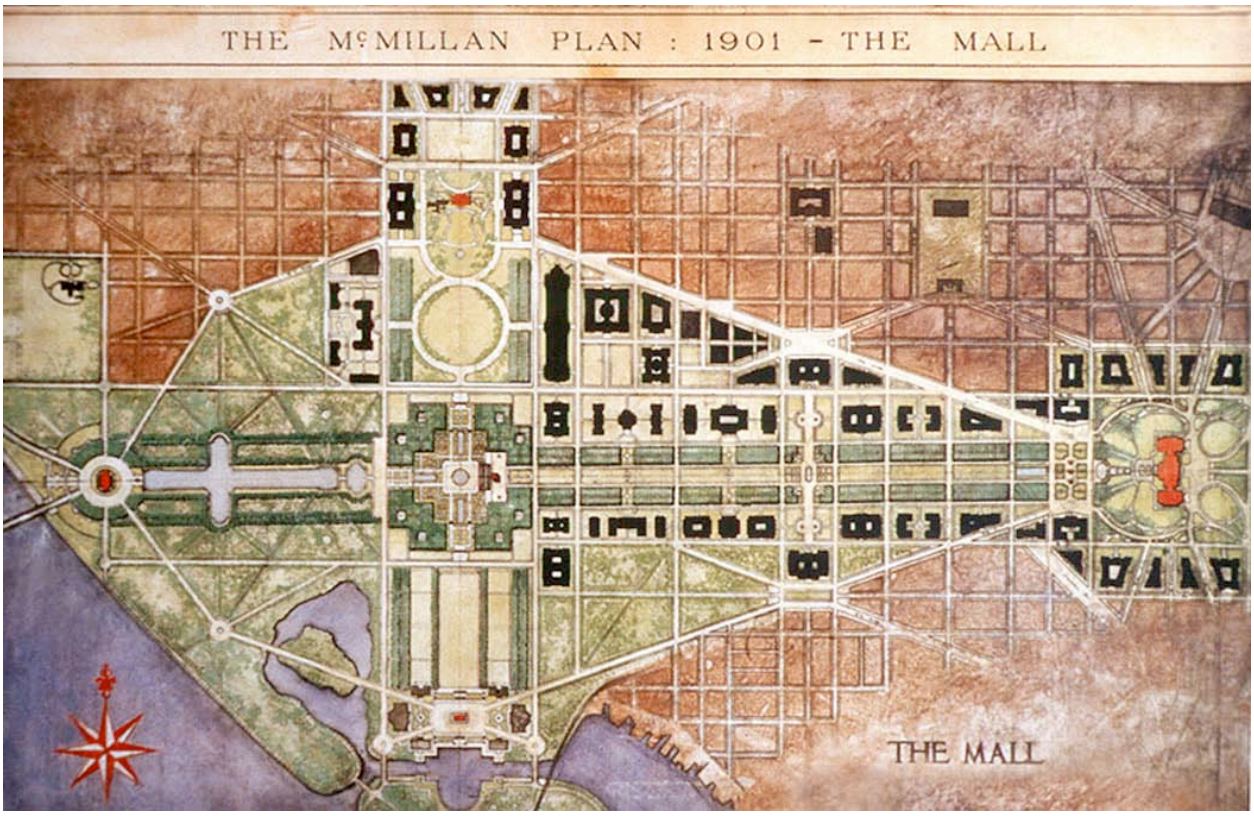


Figure 3.6—The McMillan Plan of 1901. (U.S. National Capital Planning Commission)

The McMillan Commission, on one hand restored L'Enfant's vision of the United States as heir to Western culture through built for; and, on the other hand, left ample space for expansion as the nation evolved into a world power. As Charles Moore wrote in the McMillan Commission's final report,

> the city which Washington and Jefferson planned with so much care and with such prophetic vision will continue to expand, keeping pace with national advancement, until it becomes the visible expression of the power and taste of the people of the United States. (Moore 1902, 19)

Not only does the plan of the McMillan Commission give due deference to the vision of the Founders, but also explicitly calls for the Mall to continue to change as the nation itself grows and changes.

By realigning the monumental core with the vision of the Founders, the Commission effectively communicated "a sense of continuity with its origins and with the national heritage, as expressed in architectural forms" (Hines 1991, 95). The McMillan conceptualization of the Mall continues to establish national dominance on its territory through built heritage and does so by increasing its scale and evoking imperial grandeur in the form of its buildings. By disallowing any deviation from classical architecture, the plan continued the tradition of disinheriting other groups through denial of representation. The National Mall continued to operate as an expression of European dominance and national supremacy. This unified neoclassical aesthetic has come to dominate this landscape and sets the expectation that component landscapes subordinate themselves to the master framework. Although the plan has never been fully implemented, mostly owing to inadequate funds, no other plan has had as much visible influence on the National Mall and the development of its monumental character.

Post-McMillan Plan, 1933-Present

Since the McMillan Plan went into effect, the Mall has seen a dramatic increase in public demonstrations aimed at calling national attention to the grievances of various social groups. This can be attributed to post-colonial revaluations of disinherited groups of people and widespread challenges to the traditional hegemony. These protests have, in part, been used to diversify and reinsert forgotten heritages and past injustices into the national narrative. The spatial aspect of the Mall may also have played a role in the increased number of public protests. Though unintended, the opening of the National Mall as a grand vista also provided the public with a new opportunity to seize the space for large-scale demonstrations in the heart of the federal government's seat of power. In all of the McMillan renderings, the public was represented as well behaved, passively enjoying the almost empty landscape of the Mall and its

monuments, while consuming the official version of the national heritage. The controversial, bombastic, and often subversive protest movements that have become a hallmark of this landscape were not considered.

For much of the nation's history, the political ruling class in the United States consisted almost exclusively of wealthy, white, educated men. This class used its position of political dominance to represent itself on the National Mall, legitimizing its claims to power and territory. It is only within the last fifty years that disinherited groups, such as African-Americans, have attained the level of political power necessary to affect changes in the built landscape of the Mall with monuments such as the National Dr. Martin Luther King, Jr. Memorial. Interestingly, the Mall itself plays a role in this process as disinherited groups overtake its physical space in an effort to win political power on a national scale. These actions can be understood as manifestations of Mitchell's ideas on public space, in which there is constant tension between maintaining hegemonic control over public space, and seizing public space for free political discourse.

From the woman suffrage march in the 1910s, to the civil rights demonstrations of the 1960s, and the gay rights marches of the 1990s, disinherited groups appropriated the space of the Mall to win inclusion in the officially sanctioned narrative of the nation. One may measure the degree of that success by those groups' ability to represent themselves in the Mall's officially-sanctioned heritage, legitimizing themselves in built form where once they were dissenters. Recent successes can be seen in the most recently built or soon-to-be built additions to the Mall, including the National Museum of the American Indian and the National Museum of African American History and Culture. These additions represent hard-won victories for non-dominant groups wishing to be included in America's official heritage.

This active political participation on the National Mall has had a profound influence on the development of our collective national heritage. Disinherited groups could make their voices heard, not only to those in power, but to a national audience, as protest marches on the Mall frequently garner national media attention. The efforts of this active political participation have resulted in the manifestation of the third function of national heritage: the exercise of control over the national narrative through diversification.

The Civil Rights Movement of the 1960s provides us with one example of this phenomenon. The 1963 March on Washington for Jobs and Freedom marked the largest gathering of people on the National Mall until that time. It was there that Martin Luther King, Jr. gave his famous "I Have a Dream" speech. Through this highly visible active public participation on the Mall, African-Americans appropriated the symbolism of democracy and power within the landscape to support their political cause. The Civil Rights movement, played out in part on the National Mall, increased the political capital of African-Americans on a national scale, which eventually made possible the erection of memorials on the Mall dedicated specifically to African-American heritage. The Martin Luther King, Jr. Memorial is scheduled to open in 2011, and the National Museum of African-American History and Culture is scheduled to begin construction in 2012. This type of public participation in the production of our heritage has played out other times as well. The sober view of the Vietnam War expressed in Maya Lin's sunken angular walls can be seen as an acknowledgement of public discord surrounding this conflict, as expressed in impassioned political protests on the Mall, and the subsequent need for national healing (Mock, et al. 1995; Bodnar 1992, 4-5).

This participatory aspect of producing our national heritage does not preclude hegemonic powers from continuing to produce an official heritage on this landscape, however. The overt

traditionalist references and classical symbolism of the National World War II Memorial "interprets the war as an absolute triumph of good over evil" (Benton-Short 2006, 299). Its location is also symbolically important. Holding a space between the Washington Monument, seen as defining the founding principles of the eighteenth century, and the Lincoln Memorial, which interprets the defining events of the nineteenth century, the National World War II Memorial can be said to define the most important event in the twentieth century (Benton-Short 2006, 322). This memorial was built in spite of public protests which claimed that its location on the Mall's central axis deliberately removed usable protest space from the National Mall, obstructing and closing a space for active participation and exchanging it for a place of passive consumption (Benton-Short 2006, 314-317).

Another important phenomenon occurred during this period of time: the aesthetic departure from neoclassical architecture as the only suitable building style for the Mall. For sixty years after the McMillan Plan was drafted, the Mall's major buildings strictly followed the neoclassical motif in spite of criticism from the architectural community. These building projects included the National Gallery of Art, the entirety of Federal Triangle, and the Lincoln Memorial to name a few. Even as modernism gained prominence in intellectual communities throughout the early twentieth century, the guardians of the National Mall stood opposed to the introduction of new architectural styles. It was not until the National Museum of American History was completed in a traditionalist style in 1964, and was roundly panned in the press, did the shift toward modernism become a priority in the built environment on the Mall (Wilson 1991, 160). The Hirshhorn Museum was the first of these projects. Austerely geometric and simple, the building is bold and starkly different stylistically from any other building on the Mall (Wilson 1991, 163). Since that time, most of the building projects on the Mall have followed

emerging trends in architecture, from the sharp angularity of the East Wing of the National Gallery of Art to the curvilinear forms of the National Museum of the American Indian.

These new additions do not, however, signal a complete departure from the intentions of the McMillan Plan. In spite of their non-classical forms, they all fit within the Baroque, Neoclassical frame devised by L'Enfant and the McMillan Commission.

Conclusion

Using the framework of heritage and public space to explore the evolution of the National Mall from its conception to its present condition reveals the impact of socio-political requirements on a national heritage as expressed in landscape. Those who possess political power at the federal level control the creation of this national heritage with the goal of perpetuating itself indefinitely by creating a collective national identity. Until recently, this hegemonically constructed landscape attempted to universalize a dominant European and Western imperial system as America's heritage. With the revaluation of disinherited social groups in a post-colonial context, those groups have been able to appropriate the physical space and symbolic qualities of the Mall in a bid for greater political power or freedom. As these groups gain more political power at the federal level, they are able to diversify the heritage represented on the National Mall to include viewpoints on ethnicity, class, gender, tradition, and any number of other traits.

With the diversification of heritage on the Mall, the forms used to express that heritage have also evolved from the Western, neoclassical model to more expressive forms connected to the diverse heritages being expressed. Recently, ideas of sustainability have begun to express themselves in the Mall's landscape, with the new U.S. Botanic Garden's West Showcase Garden and the National Museum of the American Indian's Ethnobotanic Garden. This represents an

effort to weave concepts of sustainability into a landscape that represents our national heritage. But what does sustainability have to do with heritage? The two concepts are in fact closely related, as the next Chapter 4 will show.

CHAPTER 4

HERITAGE AND SUSTAINABILITY: TOWARD A SYNTHESIS

Introduction

The National Mall is an excellent record of our cultural inheritance. Humans are cultural beings, living in nations with institutions and traditions built around a common history and polity. This cultural heritage, however, is not the only system inherited from past generations. Human culture has evolved over multiple generations within a context of ecological systems. These natural systems include living things and physiochemical cycles and are as vital to the survival of society as our shared heritage. As natural systems around the globe strain under the weight of human consumption, the National Mall continues to exist as an ecological void. Over three hundred acres of turf grass require constant mowing and replacement. Stressed trees, many of them exotic invasive species, struggle to survive in compacted urban soils. Rainwater is channeled directly into a combined sanitary-storm sewer, discharging untreated sewage into the Potomac and Anacostia Rivers during storm events. Tourism within the Mall also relies heavily on gas-burning buses, which endlessly ferry visitors from one site to the next (McIntyre 2007, 44). In short, the Mall promotes cultural heritage at the expense of the natural systems which allow that culture to survive. The few exceptions to this rule are just beginning to appear at the margins of this national landscape, but these efforts must be expanded if large-scale change is to be effected.

Although strides have been made in the last twenty years in defining sustainability, what it means and how it should work, there has not been a large-scale behavioral shift that would

adequately protect the natural systems necessary for survival. As David Orr, distinguished professor and lecturer, puts it, "the greatest impediment to an ecological design revolution is not…technological or scientific, but rather human" (2002, 22). If society truly wishes to avoid ecological collapse, a world that values both its cultural and natural inheritances must be created. To Orr, "the problem is not how to produce ecologically benign products for the consumer economy, but how to make decent communities in which people grow to be responsible citizens" (2002, 27). Heritage plays a critical role in the creation of nations though the promulgation of a national identity. By incorporating principles of sustainability into the collective identity of the nation, large-scale change can be accelerated. In America, the National Mall plays a critical role in creating American identity using a constructed heritage. The time has come for the stewards of this landscape to expand its role to celebrate and interpret ecological inheritances alongside cultural symbols.

In order to begin the process of incorporating the principles of sustainability with the functions of heritage, defining sustainability becomes necessary. Although there are many articles and books on the subject, this thesis will primarily use Bryan Norton, a Professor of Philosophy at the Georgia Institute of Technology, and his philosophical approach to the concept of sustainability. Norton's views on the subject are unique in that he tailors a common vocabulary for the many professions engaged with the problem of sustainability, outlining a pragmatic, normative approach that synthesizes well with other bodies of theory. The thesis will address the concept of sustainability from Norton's "strong sustainability" model, which is based on the premise that specific systems and places must be saved to avoid irreparable harm to future generations, and does not address the "weak sustainability" model, based only on economic wealth.

This chapter will present the argument that concepts of heritage and sustainability are in fact closely related. Both create continuity between the past and the future. Both involve the participation of the public in selecting what systems and ideas survive into the future, as well as taking action to protect those ideas. If human culture is to survive, it is necessary to build a heritage that fosters, not only a collective identity based on history, but also a robust respect and love for the ecological systems which sustain that culture. This is a heritage that acknowledges and celebrates a cultural relationship with the natural world. In so doing, community commitments to the perpetuation and protection of natural systems will be fostered.

This chapter begins with a discussion of the concept of sustainability as a logical necessity for the survival of future generations. The thesis then extracts Norton's normative principles of sustainability to help define what sustainability means in the context of human action. The thesis will then describe specific ways in which decisions can be made to determine what should be saved for future generations. The final section of this chapter will introduce a discussion on the sometimes-unconventional aesthetics of sustainable design, and how they might be formally expressed in landscapes with rigorous aesthetic standards, like the National Mall. The chapter concludes with a synthesis of the concepts of sustainability and heritage.

Toward a Concept of Sustainability

Any adequate concept of sustainability must necessarily concern itself with the obligation the present generation to protect the health and well being of future generations. Those who live in the present are the recipients of a wonderfully complex planet, which is the "source of all life and every economy" (Meadows 2006, 171). An obligation exists to ensure that some of that inheritance survives into the indefinite future (Norton 2005, 304-305; McLennan 2004, 37). The natural systems which comprise an ecological inheritance, however, are open and complex, and

they exist at multiple scales of space and time, making them difficult, if not impossible, to manage.

Those who live in the present have an obligation to protect these critical systems for the people who will live in the future. Day-to-day behaviors and societal institutions will have a large impact on future generations and on the planet that sustains them. An ethical responsibility exists to take dedicated action in the present to protect options for future existence, so long as those actions do not impose an unbearable cost (Norton 2005, 348). But two big sources of uncertainty impede action: (1) the uncertainty of what future generations will want, and (2) the uncertainty of the consequences of management actions on multiscalar systems of infinite complexity (Norton 2005).

Answering the question of what people in the future will want is easier than it may appear. Those who live in the present have great power to influence the values of future generations, thus guiding the wants and desires of those yet to be born (Norton 2005, 328-329). Projecting the *value* of ecological systems into the future is necessary so that generations yet to be born will receive those values, and protect the natural systems to which those values are attached. To Jason McLennan, architect, author and lecturer, sustainability is "as much about people as it is about the environment" (McLennan 2004, 46). Much like the production of heritage, sustainability creates continuity between a past, from which people receive an inheritance, and a future that values the bequest transmitted to them. If the premise is true that a moral obligation exists to protect critical natural systems for the future, then an obligation also exists to select, articulate, and transmit values into the future. The creation of institutions and traditions can help ensure the survival of valued natural systems into the future, but another tool also exists: aesthetics. The National Mall makes the abstract idea of 'America' accessible to

visitors through an immersive, unified aesthetic experience. This experience aids the transmission of values considered to be 'American' through permanent built structures, ensuring that America's cultural bequest continues to be treasured, even loved, and protected into the indefinite future.

Of course, projecting values into the future is not the only action necessary to ensure a sustainable future. It is at the very least a way to reduce uncertainty about what future generations will want. Natural systems themselves, which are the vehicles of that value, must also be protected. Management is the primary tool for protecting these critical systems. The systems themselves are so complex, however, that management interventions often have uncertain outcomes. The condition of any one part of the whole planetary system "is tied to a web of diversity that operates in incredibly complex ways" (McLennan 2004, 65). The management issue is particularly relevant as human technology improves. Human technology has dramatically increased the ability to have widespread and long-term effects on the natural systems and living things upon which humans depend for survival. Technology has advanced at an astonishing rate during the last one hundred years, and the ability to change natural systems has outpaced the ability of those systems to adapt. As managers act with uncertainty in complex systems, they are also faced with the possibility of causing irreparable harm to those very systems if they act irresponsibly (Norton 2005, 71-72). This is a troubling combination. On one hand they possess an unprecedented technological capability to act on a system to achieve a desired result, and on the other hand they must face the pervasive uncertainty of the outcome of those actions, including the possibility that the result might do more harm than good.

Norton lays out three principles in managing complex systems, which define a practice called adaptive management. Those principles are: (1) place sensitivity, (2) experimentalism, and

(3) multiscalar analysis (2005, 92). Although a complete discussion of adaptive management is beyond the scope of this thesis, a brief description of these three principles follows, as they are the keys to action in the creation of sustainable landscapes. Adaptive management not only provides a framework for acting responsibly to save complex natural systems, but also provides a way to increase knowledge of the systems, thereby reducing uncertainty within them (Norton 2005, 93).

Norton's first principle for adaptive management is place sensitivity and has its roots in Darwinian theory. According to the principle of evolution, individuals either survive or expire based on their ability to adapt to *local* conditions. Although managers should understand local conditions as nested within the context of micro and macro scales, they must view these other scales from the perspective of the local community. According to Norton, "the relevant question is not whether the society has The Truth (for all times and places) but rather whether the society has developed practices and institutions that are responsive to and sustainable in their local environment" (2005, 94). McLennan agrees that a respect for localities is a basic principle in sustainable design. In his words, "sustainable design requires learning what is unique about a given place and how those unique characteristics can be celebrated and protected" (2004, 53). Adopting a local focus not only gives managers a physical perspective, but a social one as well. Norton calls for the participation of the local community in determining public policies for the management of the systems that the community values and wants to save for future generations (2005, 94). This social component is crucial when deciding which systems to protect through management.

Simply put, living sustainably takes a *community* to work, and that means that the process of choosing what to protect must necessarily happen in the public sphere in an open and

democratic process. Only by harnessing the collective will of an entire community can we hope to create the kind of long-term institutions and day-to-day behaviors that will move human culture toward sustainability (Norton 2005 340-351, Barkin 2000, 102-103). Norton suggests an approach in structuring a public discourse designed to identify which systems the community values.

In order to translate community values into action, the community should propose, defend, and finally select, in a public forum, measurable discrete indicators of sustainable performance (Norton 2005, 344, McLennan 2004, 181-183) (Figure 4.1). For example, if a community wishes to secure their groundwater and ensure that underground aquifers are recharging properly, they might decide to choose the percentage of pervious surface as their indicator of the health of this resource. The community then sets a management goal for that indicator. In our hypothetical example, that goal may be to reduce impervious surfaces by ten percent within five years. Once the indicator is chosen, and the goal set, success can be measured and action can be taken to protect that resource, in accordance with the indicator. In Norton's words, "[t]his strategy encourages public appeal to values, but the actual deliberation is over concrete action—to choose a particular indicator as one that will be monitored and used in making management decisions" (2005, 362). In the process of choosing what indicators to monitor, the community will make its environmental values known.

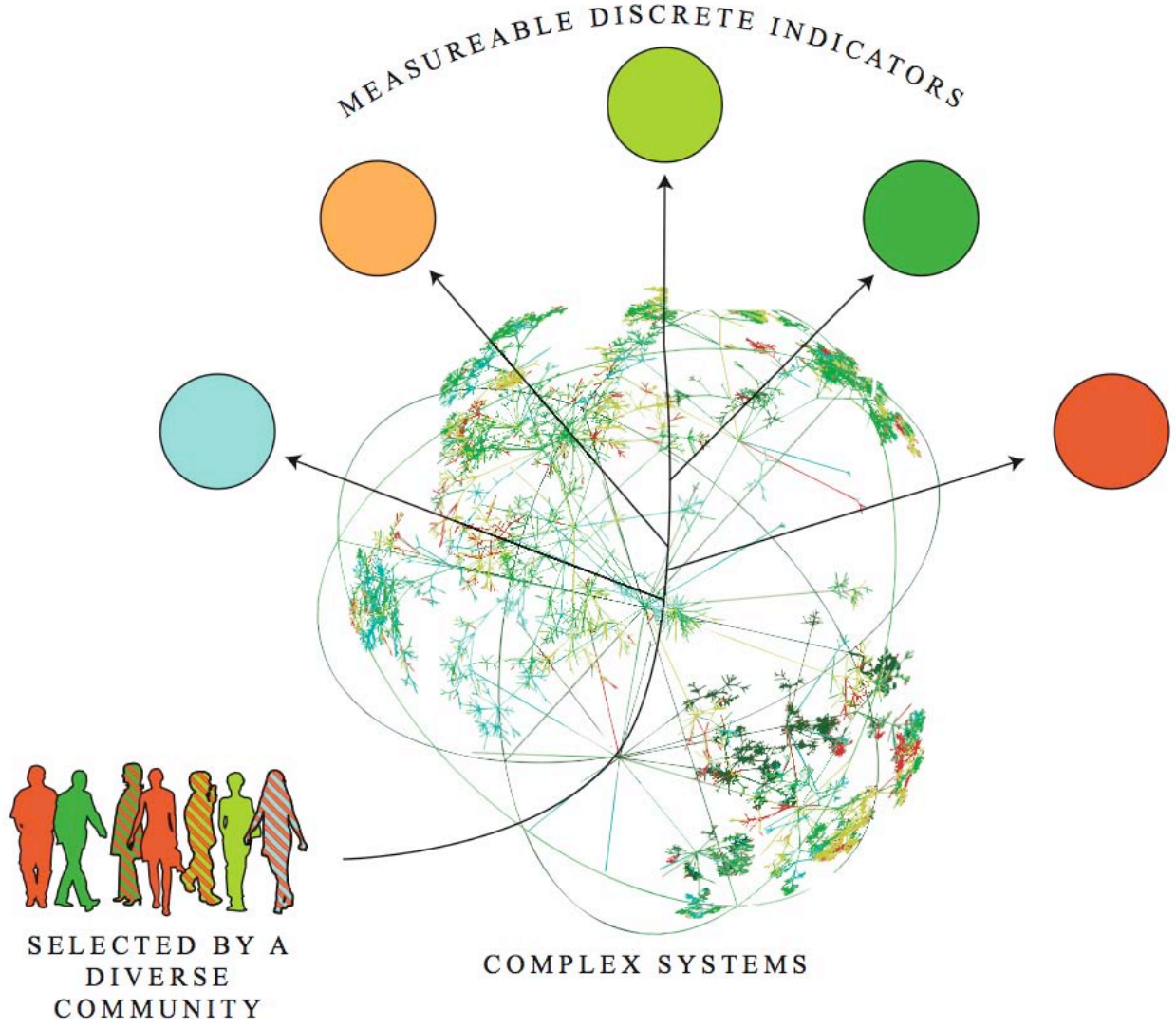


Figure 4.1— Place-based democratic participation as a principle of adaptive management. This figure illustrates the concept of democratic participation in the selection of measurable discrete indicators, through which a community expresses its values. Figure by the author. Complex systems graphic used with permission. Copyright 2003 The Regents of the University of California. All Rights Reserved.

The importance of an open democratic process to making sustainability work cannot be overstated. A commitment to protect ecological systems means no less than the creation of a culture, which values those systems as important to their heritage. To Orr, "ecological design…is an ongoing negotiation between a community and the ecology of particular places"

(2002, 28). By opening the process of deciding what to protect to the public, the likelihood goes up that weak assumptions will be thrown out and strong indicators will be selected, as diverse communities bring many levels of expertise and information to the public debate (Norton 2005, 362). The community will also select values that are important in that specific locality, allowing management decisions to be made in accordance with the specific needs of that place. This expression of local values reinforces the community's cultural relationship with the natural systems that form its context and give it meaning.

Norton's second principle, experimentalism, means that managers should use management *experience* to reduce uncertainty in complex systems through experimentation and observation (Figure 4.2). Managers can then adapt management goals and objectives according to this new knowledge. That is to say, managers can act responsibly in the face of uncertainty by embracing that uncertainty and using management actions as learning tools, thereby incrementally increasing knowledge of how these systems operate. In Norton's words, "[t]he very goal of sustainable living is a moving, changing target, to be defined as part of a process and refined as more experience pours in" (Norton 2005, 93).

McLennan also outlines learning as a key component in sustainable design (2004, 92), and David Orr describes a process he calls "slow knowledge [as occurring] incrementally through the process of community learning, motivated…by affection" (2002, 39). As knowledge increases, so the effectiveness of management interventions also increases, allowing incremental increases in practical knowledge to bequeath to subsequent generations, which will allow them to continue to build on that knowledge. Dennis Meadows, author and Professor Emeritus of Systems Management at the University of New Hampshire, agrees that experimentation is a critical tool for living sustainably. In his words: "Use your action, whatever it is, to

learn…Learning means the willingness to go slowly, to try things out, and to collect information about the effects of actions, including the crucial but not always welcome information that the action is not working" (2006, 173-174).

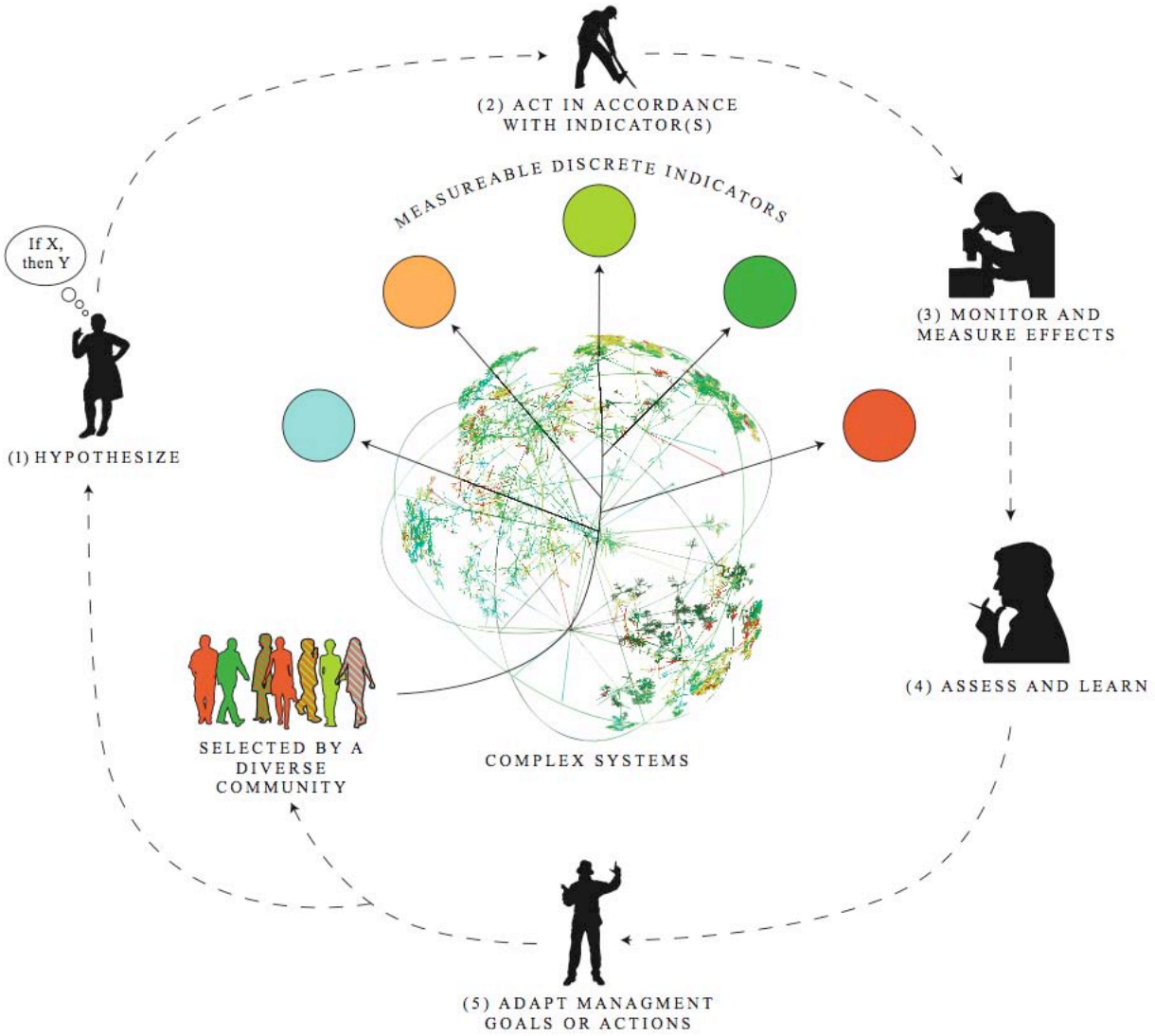


Figure 4.2— Experimentalism as a principle of adaptive management. A cyclical process, managers hypothesize and act in accordance with the community's indicators, learn from their interventions, and adapt their practices so as to achieve the best possible outcomes. Figure by the author. Complex systems graphic used with permission. Copyright 2003 The Regents of the University of California. All Rights Reserved.

The third principle, multiscalar analysis, provides a hierarchical way of thinking, which acknowledges that management actions affect complex systems over multiple scales of both space and time (Figure 4.3). That is to say, managers should embrace the complexity of the systems being managed by understanding that parts of the system change over much longer periods of time at a macro scale, or much shorter periods of time at a micro scale, than the scale at which interventions are made. It is a way of nesting management actions within a broader context and a way of understanding that those actions have effects beyond the piece of the system upon which the intervention is made. As Ian McHarg, the father of sustainable design writes, "nature is a single interacting system and…changes to any part will affect the operation of the whole" (1969, 56). Within that understanding, managers can monitor these micro and macro scales for signs that our actions are working or not. In the words of Bryan Norton, multiscalar analysis "amounts to a commitment to build the formal apparatus necessary to follow the systematic consequences of our acts as they play out on different scales of the system" (2005, 93).

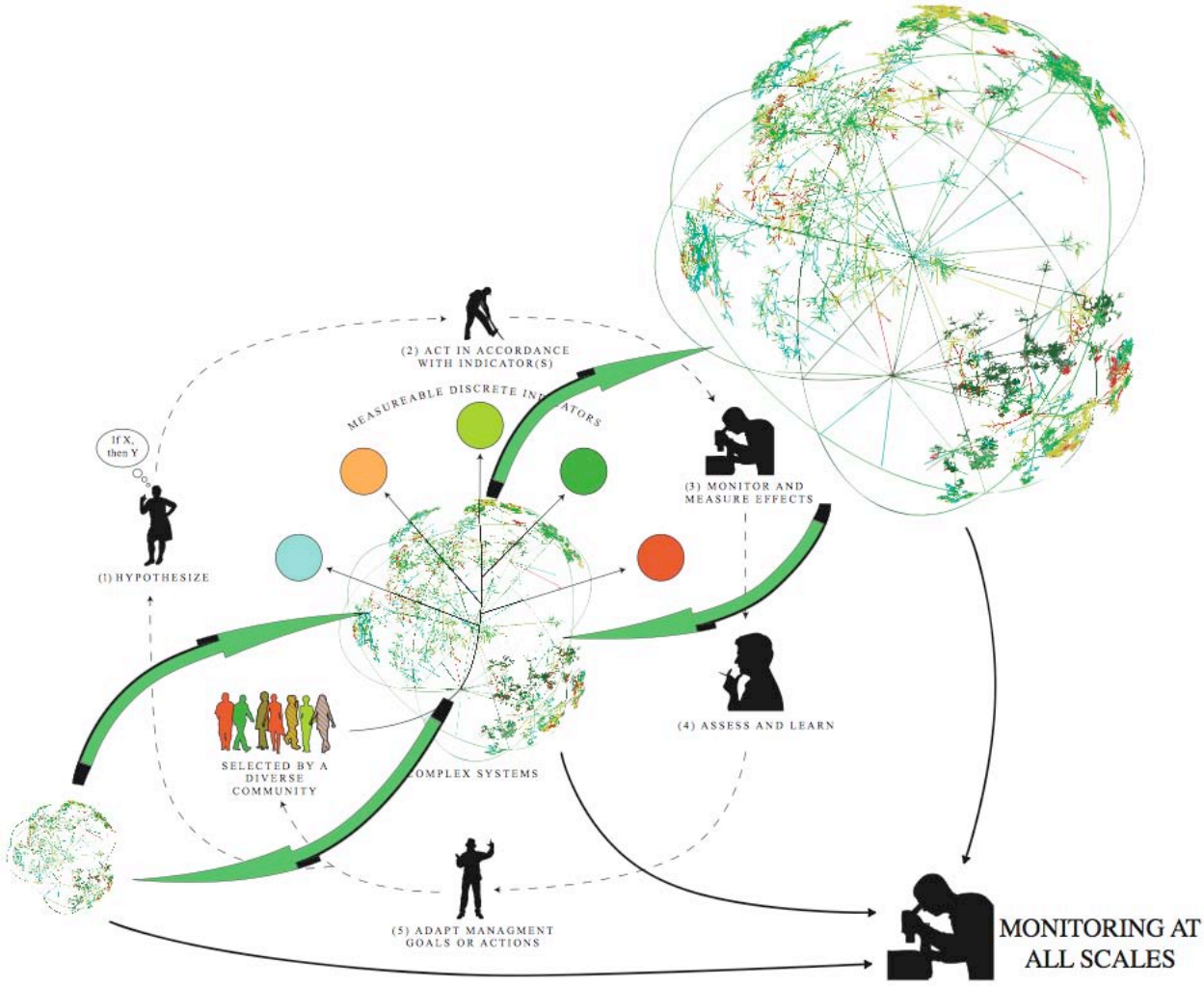


Figure 4.3— Multiscalar analysis as a principle of adaptive management. When managers use multiscalar analysis, they acknowledge that their actions affect multiple scales of space and time, not only the scale at which they act. Therefore, monitoring should occur at both the macro and micro scales, so that long and short-term effects of management actions can be understood. Figure by the author. Complex systems graphic used with permission. Copyright 2003 The Regents of the University of California. All Rights Reserved.

According to Norton, those who live in the present can meet their obligation to the future and move toward sustainability by reducing uncertainties that act as barriers to action; first by making a commitment to transmit values into the future, thereby reducing uncertainty in what people in the future will want, and second by using management as a learning tool, thereby

reducing uncertainty in the complex systems society values and tries to sustain. Management decisions should be made with an understanding that the systems upon which managers act will respond to those interventions at different scales of space and time, and therefore need to be monitored to assess any impacts those actions might have. Nevertheless, managers should always act locally to ensure that actions are aimed at protecting the specific systems that individual communities value. That is to say, different communities, with different place-based needs, will value different systems to protect for the future. There is no one-size-fits-all answer as to what should be protected for all people everywhere, and each community that wants to leave a bequest to future generations needs to be involved in deciding what that bequest should be. Norton tries to summarize these concepts in a schematic definition of sustainability as follows: "sustainability is a relationship between generations such that the earlier generations fulfill their individual wants and needs so as not to destroy, or close off, important and valued options for future generations" (2005, 363).

Any culture that wishes to exist over multiple generations must necessarily concern itself with its own perpetuation, that is to say, at the very least, the survival of future generations. However, the mere survival of humanity is not enough. Not only must individuals be able to survive and reproduce successfully, but a community must also be in place to support those individuals (Norton 2005, 150). This idea of sustaining a community lies at the heart of living sustainably, and also reflects the principles of heritage. Heritage sustains communities by selecting aspects of shared history and taking dedicated action to pass them down to future generations. In this way, community values are perpetuated into the future. In the landscape of the National Mall, the political community passes values to subsequent generations through built works commemorating selected persons or events seen to embody those values. Today, the

custodians of the National Mall must use this same mechanism to transmit values related to natural systems to produce the large-scale cultural change required to create a sustainable nation.

Formal Expression of Sustainable Design

Weaving the principles of sustainability in with the cultural heritage presented on the National Mall is necessary. However, these arguments will not impress the Mall's regulatory agencies if the final design does not conform to its aesthetic context. The architectural aesthetic of the Mall has diversified in the last fifty years, expanding to incorporate new styles even as the heritage expressed on the Mall diversifies. This is good news for those who wish to build a sustainable landscape here. However, it is important to remember that these new architectural styles all fit within the unifying composition outlined by L'Enfant and the McMillan Commission. If the USDA wishes to create a garden on the Mall that delivers an ecological message of sustainability, that message must be delivered in a way that meets the aesthetic expectations and norms of its specific context. If the formal expression of the USDA's ecological landscape appear messy or aesthetically unpleasing, it is unlikely to last long within the confines of the National Mall, or indeed be approved for construction in the first place! What the USDA needs is a garden that achieves sustainable goals and fits in a context-appropriate frame.

Aesthetic perception of the landscape can link people to ecological processes and natural systems, making it a powerful tool for engaging the public for educational purposes. It is not surprising that landscapes that are perceived as aesthetically pleasing are more likely to be protected than landscapes that are considered unappealing or out-of-place (Gobster, et al. 2007, 960). Sometimes ecologically functional landscapes that conserve water, build soils, and provide habitat, such as a wetland, are perceived as less aesthetically pleasing than the more

consumptive, less ecologically functional land, such as a lush green lawn. Since people cannot observe ecological quality directly, they tend to equate a place's ecological quality with its aesthetic quality (Gobster, et al. 2007, 962). This poses a problem for the USDA, which wishes to build an ecologically functional sustainability garden on the National Mall. In the words of Joan Nassauer, Professor of Landscape Architecture at the University of Michigan, "what *is* good may not *look* good, and what *looks* good may not *be* good" (1995, 161 emphasis in the original).

As we have established, sustainability can only be achieved if we are able to transmit natural systems *along with the values attached to them* into the future. This garden will certainly have an impact on local urban systems, but its primary value will be in the transmission of ecological values to a large number of people. Elizabeth Meyer, a Professor of Landscape Architecture at the University of Virginia, has recently proposed that "immersive, aesthetic experience can lead to recognition, empathy, love, respect, and care for the environment" (2008, 96). Orr agrees, saying, "solutions to environmental problems must be designed to resonate at deep emotional levels" (2002, 24). If the argument that landscape experience can influence our moral and intellectual values is true, then the task of addressing the aesthetics of this garden becomes extremely important. If the garden can achieve both aesthetic unity and ecological functionality, it can be a catalyst for change in the national landscape. People want to surround themselves with places and forms they find pleasing, so delivering a genuine aesthetic experience can prompt the attempted replication of that experience at the scale of individual homes, neighborhoods, and communities, aggregating into the kind of large-scale change needed to move us closer to sustainability (Gobster, et al. 2007, 965).

Joan Nassauer's research into aesthetic preferences can give us an approach to creating ecologically functional landscapes that meet aesthetic expectations. In her writings, Nassauer sees landscape as both an ecological system and a communication system, which acts as a kind of 'portrait' of the people responsible for tending it (1995, 162). Well-tended, orderly places are seen to reflect positively on the people who care for it, indicating traits such as good hospitality, dignity, and effort. Likewise, disorderly, or untended places, though they may be rich ecologically, are associated with neglect and the need for improvement (Nassauer 1995, 162). The key to presenting 'messy' ecosystems is to frame them using the formal vocabulary of their context. Evidence of human intention and care will improve the aesthetic reception of such a landscape, making it more effective at delivering its message (Nassauer 1995, 163). Meyer agrees that the imitation of ecological *function* is more important that the imitation of ecological *form* (2008, 118). She goes on to say that ecological design should be "form-full, evident, and palpable" (Meyer 2008, 118) so that it draws people away from their everyday routines and engages them in new ways, weaving ecological processes in with the familiar forms of daily urban life.

There is one more point to make here. A transformative aesthetic experience is not the only way to influence visitors' perception of ecologically functional land. Increasing knowledge through interpretation can be used to change aesthetic perceptions (Gobster, et al. 2007, 964). Interpretation can call people's attention to positive aspects of ecologically functional land by pointing out "forms of stewardship that may not be readily apparent" (Gobster, et al. 2007, 970). Likewise it can teach about the more negative impacts of more culturally acceptable practices, by pointing out the invasive tendencies of English Ivy for example (Gobster, et al. 2007, 970). Such interpretation can be accomplished by (1) providing information in the form of signs, pamphlets,

or audio tours; (2) having a dialogue, say with a guided tour or lecture; or (3) through direct participation and interaction with the landscape, by planting vegetables for instance (Gobster, et al. 2007, 970; Scott and Gough 2003, 38-41). In any case, interpretation should refrain from being overly negative, and should not try to scare people into living sustainably by presenting doomsday scenarios. Instead, interpretation should appeal to the best aspects of human nature: generosity, compassion, love, hope, and mindfulness (Gobster, et al. 2007, 971; Meadows 2006, 175-176).

Conclusion

Built expressions of sustainability have a rightful place in the National Mall, the prime landscape expressive of America's national heritage. In fact, promoting sustainability through the lens of national heritage is an obligation that can no longer be put off. In fact, the two concepts are closely related. Heritage and sustainability are similar in four key ways: (1) both concepts involve creating *continuity* between a past, from which humans inherit cultural and natural systems, and a projected future, in which those systems are sustained indefinitely; (2) both concepts require *choices* in the present about what to value, and what is worth saving for the future; (3) both concepts require *dedicated action* in the present to ensure those systems survive into the future; and (4) both require the *participation* of the public.

Creating continuity between the past and the future is one of the key functions of both heritage and sustainability. However, such continuity is not always linear. Those who live in the present receive, reinvent, and reinterpret the events of the past. They also must revalue and sustain the natural resources, places, and systems that form the context of human civilization. Together, these amount to the total bequest we leave our descendants. *Sustaining natural systems* cannot take place outside the *creation of a culture* that values natural things enough to

act to perpetuate them indefinitely. Likewise the creation of a culture that does not value natural systems cannot hope to endure very long, as individuals depend upon those systems for biological survival. Both are required to live sustainably (Figure 4.4). According to Norton, "We can harm the future by failing to create and maintain a culture and a community respectful of its past, including both the human and the natural history of the common heritage" (2005, 339).

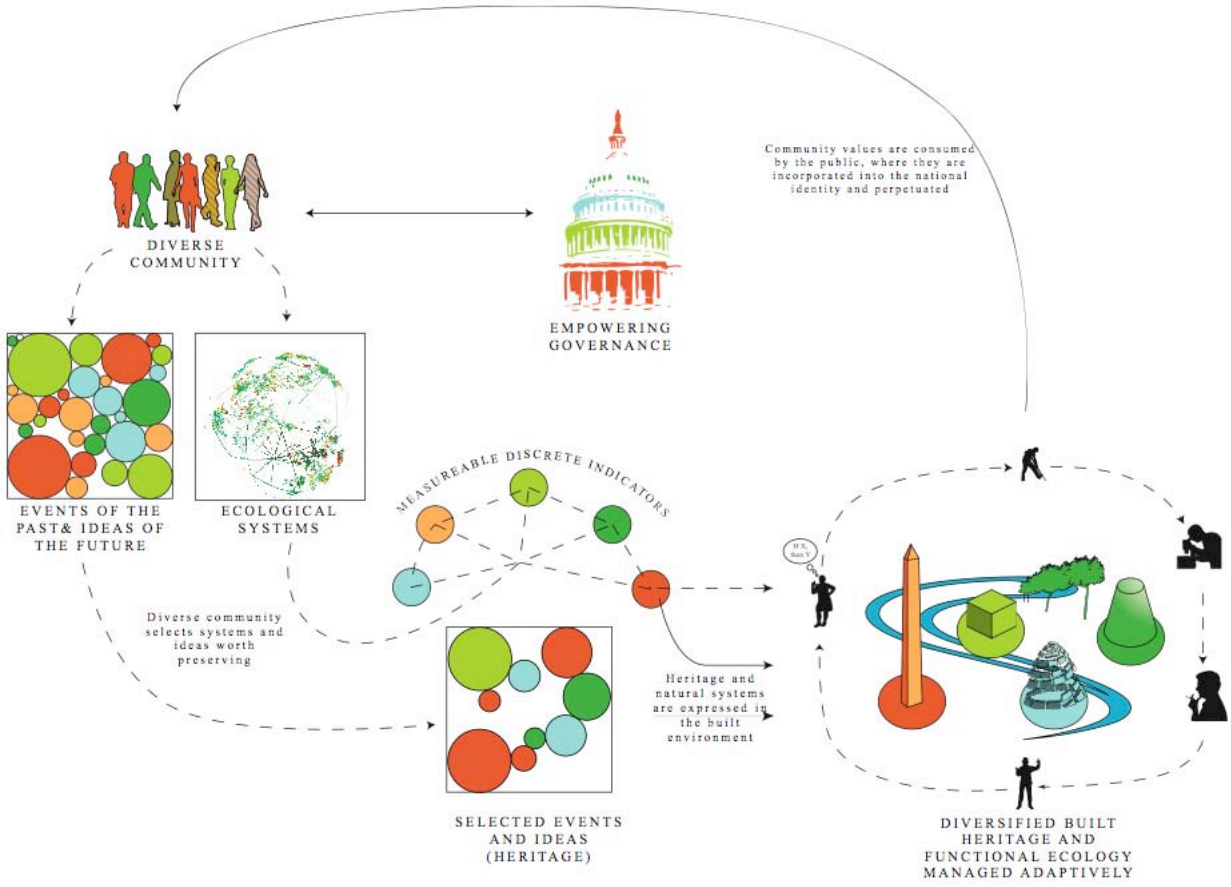


Figure 4.4—Sustainability incorporated into the production of heritage. Figure by the author. Complex systems graphic used with permission. Copyright 2003 The Regents of the University of California. All Rights Reserved.

The perpetuation of both cultural and natural capital into the future also requires choices on what to value (Norton 2005, 340). The simple fact is that not everything can be saved for the

future. Communities have to select from an infinite array of options, what is most valuable. If a monument were built for every event, great or small, there would be no value to any of them. Likewise, if every place were considered worthy of protection, then there would be no value distinction between the Great Smokey Mountains and the corner gas station. That is to say, if everything is special, then nothing is. Choices of what we would like to save for future generations are a reflection of contemporary values, and these choices manifest themselves in a variety of ways, including music, art, literature, and architecture. All of these are vehicles to spread values, not only amongst people alive today, but to future generations as well.

After people choose what it is they value and want to protect, committed sustained action is necessary to ensure those systems, places, and resources, along with the values attached to them, persist into the indefinite future. Sustainability and the production of heritage are both normative, in that they both require behavioral action to function properly. Norton's principles of adaptive management give a blueprint for how to *behave* sustainably. Likewise, the production and protection of heritage requires action to memorialize, write, legislate, or otherwise codify a piece of history for public consumption.

Lastly, public participation is critical in both the choice of what to protect and the dedicated action required for that protection to work. There is broad consensus that sustainable policy must involve the communities who will be impacted by those policy decisions (Norton 2005, 348; Barkin 2000, 102-103; Meadows 2006, 169-170). Implementing sustainable practices and policies is not a top-down endeavor, but government does have a role to play by encouraging "creative participatory energies" (Barkin 2000, 103) that move our society closer to sustainability. Likewise, public participation in the production of heritage on the Mall is evident

in the protest movements of the twentieth century, which allowed for more diverse expressions of heritage to be built in that landscape.

In essence, heritage and sustainability can be said to be two sides of the same coin. If people are to live sustainably, they must *strategically intervene* in the process of heritage production for the purpose of creating a culture intent on protecting its cultural *and* natural inheritances. The National Mall, as the prime reservoir of America's national cultural heritage, must begin to incorporate natural inheritances in its built forms as well. By presenting a love and respect for ecological systems as a part of national heritage, ideas of sustainability can begin to be incorporated into the collective national identity.

The USDA can use this synthesis of theory to advance a program for a sustainability garden on the National Mall. Additionally, with a presence on the Mall since the late 1850s, the Department has a historical legacy from which to pull. In fact, the USDA managed extensive gardens on the Mall in the nineteenth century, and many of the management practices described in these gardens echo a synthesis of heritage and sustainability. Though the term was not used, the USDA was operating public sustainability gardens on the Mall before the Civil War. These gardens, and the history of the Department on the Mall is the subject of the next chapter.

CHAPTER 5

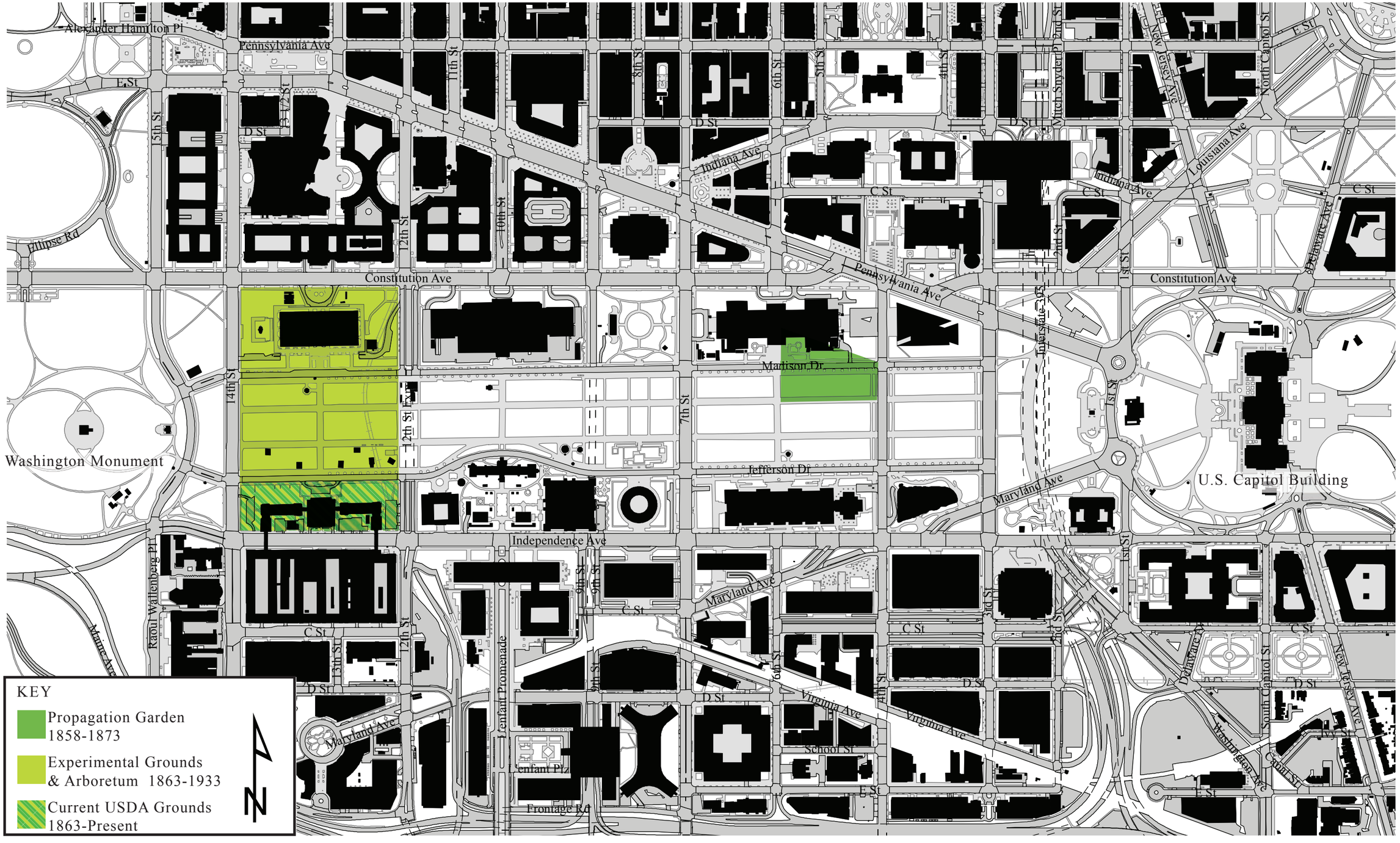
THE UNITED STATES DEPARTMENT OF AGRICULTURE AND THE NATIONAL MALL: A HISTORY OF STEWARDSHIP

Introduction

As this study focuses on the new initiative to develop a demonstration garden at the United States Department of Agriculture (USDA) headquarters on the National Mall, a closer look at the history of the Department's place on the Mall is warranted. The USDA has resided on the Mall since the construction of a small propagating garden there in 1858. Since that time, it has significantly influenced the form and program of this preeminent national landscape (Figure 5.1).

From the mid-1860s through the early twentieth century, the USDA had direct control over more than forty acres on the National Mall. These grounds, directly east of the Washington Monument, were used for agricultural experimentation, plant propagation, and public education, and they remained planted as an arboretum until the early 1930s. The USDA was also one of the first institutions on the National Mall to construct new buildings in accordance with the McMillan Plan, reinforcing the axial thoroughfare recommended by the Parks Commission (Dalrymple 2006, 207). Although its experimental grounds have long since moved to larger tracts of land more suited for scientific research, the Department has recently returned to its historic role as public educator through its initiative to convert its grounds into a demonstration garden for sustainable landscape practices.

Figure 5.1—Plan of the eastern part of the National Mall, which shows the locations of USDA gardens from 1858-Present. Map not to scale.


Alexander Hamilton Pl
Pennsylvania Ave
E St
15th St
D St
17th St
11th St
8th St
6th St
5th St
4th St
3rd St
2nd St
New Jersey Ave
North Capitol St
E St
Ellipse Rd
12th St
10th St
Indiana Ave
C St
Louisiana Ave
Constitution Ave
Pennsylvania Ave
Interstate 395
1st St
Delaware Ave
Madison Dr
14th St
7th St
Washington Monument
Jefferson Dr
U.S. Capitol Building
Maryland Ave
Independence Ave
Raoul Wallenberg Pl
Maine Ave
13th St
9th St
L'Enfant Promenade
Virginia Ave
School St
L'enfant Plz
Frontage Rd
South Capitol St
New Jersey Ave
Washington Ave
KEY
Propagation Garden
1858-1873
Experimental Grounds
& Arboretum 1863-1933
Current USDA Grounds
1863-Present
N

Because of its historic position on the National Mall, and the public nature of this landscape, the USDA has found itself in the sometimes-surprising role of city planner and public educator. It also has a history of acknowledging our culture's dependence on natural systems in built form on the Mall. Though lost for much of the twentieth century, this built heritage of sustainability is reemerging on the Department's current grounds on the Mall. What follows is a historical sketch of these influences on the National Mall from the nineteenth century to today.

The Propagation Garden, 1858-1873

Since the founding of the nation, both leaders and citizens had recognized the need for scientific experimentation with the aim of improving agricultural output through better farming practices and improved crop varieties. Several independent agricultural societies formed in the first half of the nineteenth century in Washington with the aim of improving agriculture, the basis for the United States' economy, but these societies died off as they failed to build permanent institutions to perpetuate their work. Increasingly, there were calls for the federal government to expand its role in enhancing agricultural output (Pinkett 1951; Wiser 1966, 283-284).

The Agricultural Division of the United States Patent Office adopted this function in 1839, and undertook some limited agricultural experimentation in greenhouses within the city of Washington. Recognizing that more space was needed for experimentation, the Commissioner of Patents requested land on the Mall for "the purpose of cultivating and propagating seeds and cuttings" (Wiser 1966, 284; Dalrymple 2006, 209). Congress granted this request in 1856, with a small bequest of marshy land due west of the Capitol building. Thus, the USDA's first home on the National Mall took the form of a small propagation garden, completed in 1858. Six acres in size, the garden was located between 4½ and 6th Streets on the north side of the Washington

canal and fronting the no-longer existing Missouri Avenue (Figures 5.1, 5.2, & 5.3) (U.S. Congress 1858, 281). This land was cultivated for the purpose of researching plants, distributing seed, and evaluating the economic potential of crops not yet widely grown in the states, especially sorghum, sugarcane, and tea (Wiser 1966, 284).

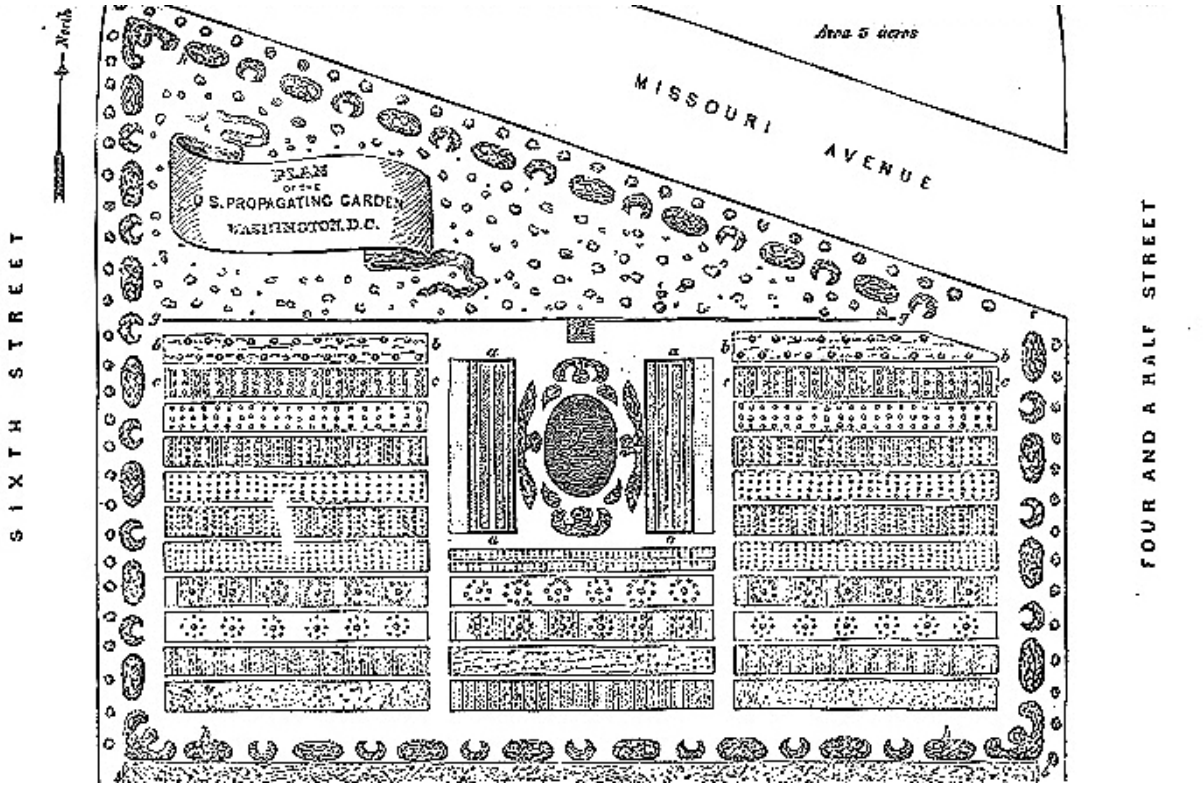


Figure 5.2—Plan of the Propagation Garden, 1858, "The letters aa, aa, aa, denote propagating houses; bb, bb, &c., beds proposed to be planted with deciduous-leaved trees, shrubs, and vines, preparatory to their removal to the localities which they are finally to occupy; cc,cc, &c., beds to be planted with coniferous trees for similar objects; d, dormitory for gardener, with apiary above; e, entrance gate from avenue; f, fountain and aquarium; gg, a continuous trellis, exclusively for native grapes; hh, evergreen hedges, of various forms, for protection against sun and wind of delicate shrubs and plants" (U.S. Patent Office 1858, 281).

When Abraham Lincoln signed legislation extracting the Agricultural Division from the Patent Office in 1862, he also assigned the management of the Propagation Gardens to Isaac Newton, the first Commissioner of the Department of Agriculture (Wiser 1966, 286; White 1960,

1). Newton, recognizing that the six-acre gardens did not allow for large-scale experiments, pressed for more land. His efforts paid off in 1863, when the Commissioner of Public Buildings granted him Government Reservation No. 2, consisting of about forty acres on the Mall between 12th and 14th Streets, directly east of the Washington Monument (Figure 5.1). However, the USDA was unable to take possession of this tract until 1865, as the Department of War was using the grounds as a cattle yard to supply Union troops (U.S. General Services Administration 1964, 8; Dalrymple 2006, 210).

Newton hired William Saunders, a well-known horticulturist and landscape gardener, to manage the propagation garden. Saunders wrote prolifically, having published botanical writings in Andrew Jackson Downing's *Horticulturist* magazine, as well as architectural criticism in *Sloan's Architectural Review*. He was a fierce advocate of the benefits of landscape gardening for the health of the city, believing that horticultural education was necessary, not only for scientific advancement, but also for artistic pursuits. He became one of the founding members of the National Grange of the Order of Patrons of Husbandry, and served as its first President. Notable among his many other projects, he designed the Gettysburg National Cemetery, and became the leading consultant in implementing Washington, DC's street tree plan in the late nineteenth century (Saunders 1899).

Upon assuming management of the gardens, Saunders enumerated the purposes of the gardens in his report of 1862 as follows:

1. To procure and encourage the transmission of seeds, cuttings, bulbs and plants from all sources, both foreign and domestic, for the purpose of testing their merits, and adaptation in general, or for particular localities of this country.
2. To procure by hybridizing and special culture, products of a superior character to any now existing.
3. To ascertain by experiment the influences of varied culture on products, and the modifications effected by the operations of pruning and other manipulations on trees and fruits.

4. To investigate more thoroughly the various maladies and diseases of plants, and the insects that destroy them.
5. To provide ample means for thoroughly testing samples of all seeds, and other contributions that may be received.
6. To cultivate specimens of the various hedge plants, and exhibit their availability for that purpose.
7. To cultivate a collection of the best fruit trees and plants, such as grapes, apples, pears, peaches, strawberries, raspberries, currants, etc., so as to compare their respective merits.
8. To plant a collection of choice shrubs, adapted for decorating gardens and landscape scenery.
9. To erect glass structures for the twofold purpose of affording the necessary facilities for cultivating exotic fruits and plants, and to furnish examples of the best and most economical modes of constructing, heating, and managing such buildings. (U.S. Department of Agriculture 1862, 541-542)

In addition to their experimental purposes, the gardens also had a public function to "exhibit" and "furnish examples" of the practices being developed there. Writing in his report of 1867, Saunders called for the experimental grounds to "present to the public eye its gradual development, and thus stimulate and encourage a spirit of improvement" (U.S. Department of Agriculture 1867, 19) especially with regard to soil 'impoverishing' agricultural practices. Though he did not use the term, Saunders advocated a system of composting in which "waste materials may be returned from the cities, where they are a nuisance, back to the soil, to maintain its fertility, to be followed with a judicious system of cultivation and rotation of crops" (U.S. Department of Agriculture 1867, 19). Recognizing the unsustainable nature of contemporary agricultural practices with regard to soil erosion and exhaustion, Saunders recommended the use of the Propagating Gardens as a demonstration garden to show "healthful and productive" methods of enriching the soil to sustain the nation's agricultural economy (U.S. Department of Agriculture 1867, 19).

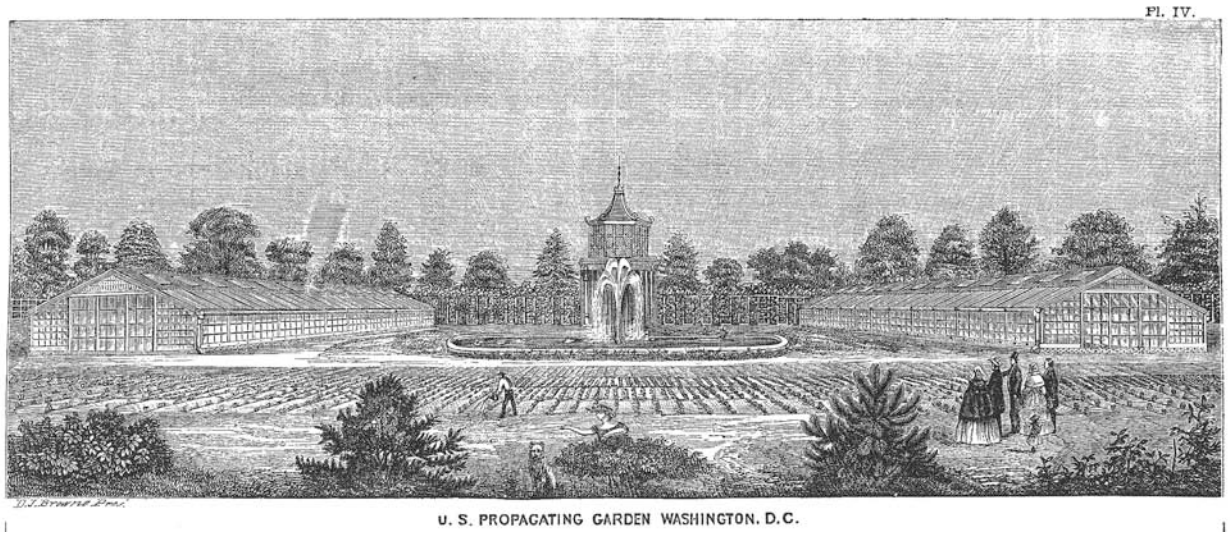


Figure 5.3—Artist's conception of the Propagation Garden (U.S. Patent Office 1858)

Through the Civil War, Saunders proficiently managed the Propagation Gardens, and distributed tens of thousands of plants to all states and territories within the Union, primarily through members of Congress. At the conclusion of the Civil War in 1865, the USDA took possession of Reservation No. 2 to conduct experiments in field crops, but found the reservation to be insufficiently small to be able to control for variables in their experiments. Instead of using the new grounds as an experimental farm, it was decided to convert the bulk of the land into a public arboretum, retaining some portions for propagation, experimentation, and the construction of a new national headquarters for the Department. The Propagation Gardens were finally closed in 1873, when the Washington Canal was filled, in exchange for four acres on the north side of Reservation No. 2, previously occupied by the canal (White 1960, 2; Dalrymple 2006, 210).

The USDA Arboretum, 1868-1933

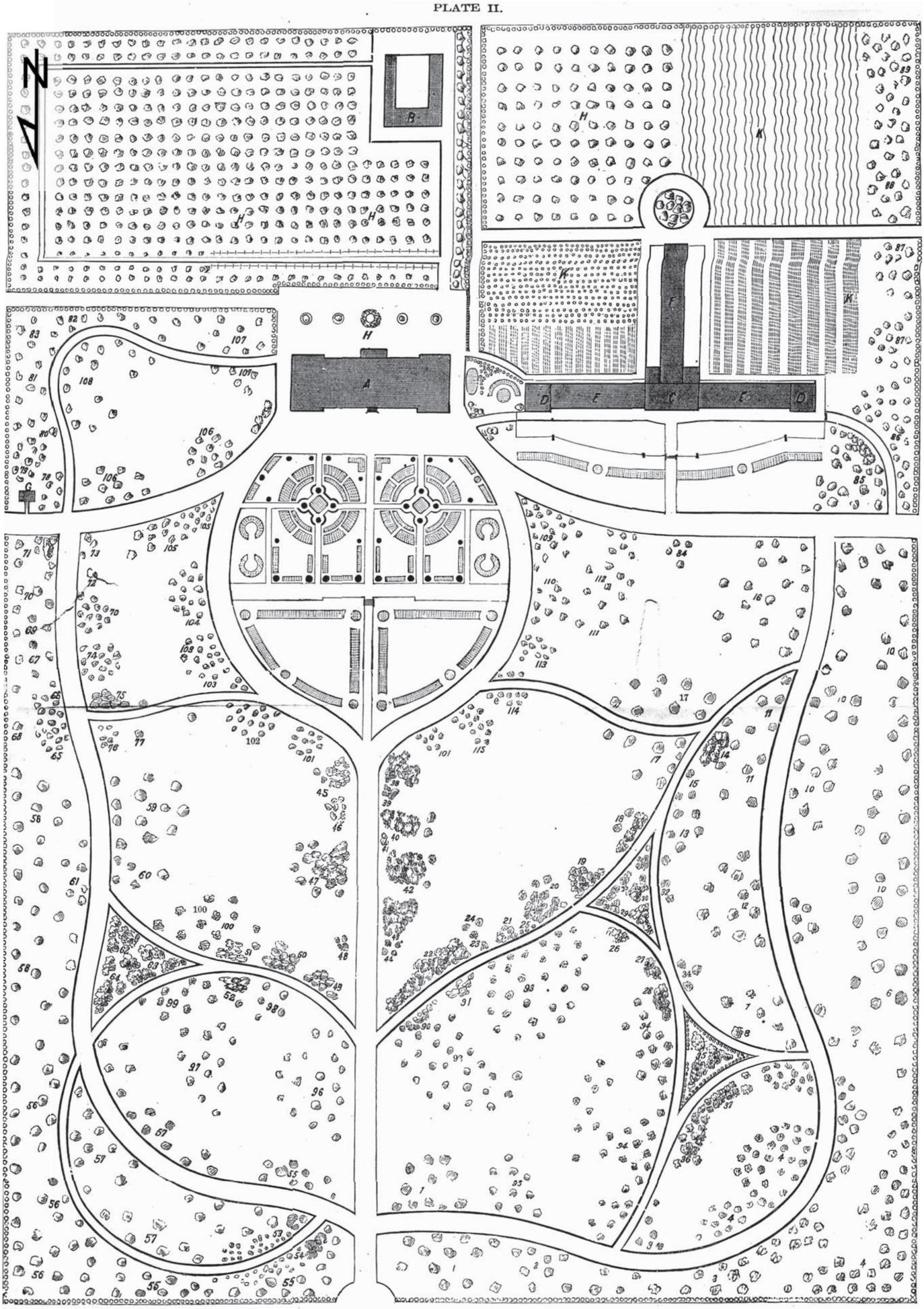
In 1867, Congress appropriated funds for the construction of the first administration building for the USDA. Adolf Cluss, a prominent architect whose other work includes the Smithsonian Arts and Industries building also located on the Mall, worked with William

Saunders to site the building. Saunders, who had advocated unifying the Mall with an east-west avenue connecting the Capitol with the Potomac in *Sloans Architectural Review* three years earlier, made sure to set the building slightly back from the existing Smithsonian Castle in case "such an avenue became to be talked of" (Saunders 1899). In addition to siting the main building, Saunders laid out the northern portion of the grounds as a public arboretum, retaining several acres in the southern portion for cultivation and experimentation (Figure 5.4).

Though not explicitly listed, the purposes for this arboretum are implicit in Saunders' writings. The most obvious purpose of the garden was for botanical education. In a letter, dated January 13, 1868 to Commissioner of Agriculture Horace Capron, Saunders describes the arboretum as "a school of instruction," which would "advance our progress in the knowledge of vegetable physiology, and furnish a strong incentive to botanical studies" (National Grange of the Patrons of Husbandry records). This purpose was accomplished through use of a strict horticultural arrangement, where members of each botanical family were planted proximal to one another so that the characteristics common to each class might be studied (William Saunders to Commissioner of Agriculture Horace Capron, January 13, 1868, National Grange of the Patrons of Husbandry records; U.S. Department of Agriculture 1869; 91).

Figure 5.4—Plan showing the USDA Arboretum, greenhouses, and experimental grounds as drawn by William Saunders. Plan key appears on following page (U.S. Department of Agriculture 1870).

PLATE II.



PLAN OF THE DEPARTMENT GROUNDS.

Key for Figure 5.4--
Betulaceae.—1, Betula; 2, Alnus.
Salicaceae.—3, Populus; 4, Salix.
Platanaceae.—5, Platanus.
Juglandaceae.—6, Juglans; 7, Carya; 8, Pterocarya.
Elaeagnaceae.—9, Elaeagnus, Shepherdia, Hippophaë.
Cupiliferae.—10, Quercus; 11, Castanea; 12, Fagus; 13, Carpinus; 14, Corylus; 15, Ostrya.
Tiliaceae.—16, Tilia.
Magnoliaceae.—17, Magnolia, Liriodendron, Kadsura, Schizandra.
Hypericaceae.—18, Hypericum, Androsaemum.
Saxifragaceae.—19, Philadelphus; 26, Deutzia; 27, Hydrangea, Decumaria; 28, Ribes, Itea.
Celastraceae.—20, Euonymus, Celastrus.
Rosaceae.—21, Rubus; 22, Spirea; 23, Kerria; 24, Schizonotus; 25, Potentilla; 49, Cydonia; 50, Cotoneaster, Amelanchier; 86, Pyrus; 87, Crataegus; 88, Prunus; 89, Amygdalus, Amygdalopis
Lythracea.—29, Punica, Lagerstroemia.
Menispermaceae.—30, Cocculus, Menispermum, Calycocarpum.
Lardizabalaceae.—31, Akebia, Stauntonia.
Hamamelaceae.—32, Hamamelis, Fothergilla, Liquidambar.
Anonaceae.—33, Asimena.
Styracaceae.—34, Styrax, Halesia, Symplocos.
Ericaceae.—35, Gaylussacia, Vaccinum, Chiogenes, Arctostaphylos, Epigaea, Arbutus, Leucothoë, Cassandra, Cassiope, Andromeda, Oxydendron, Clethra, Phyllodoce, Pernettya, Kalmia, Daboecia, Menziesia, Azalea, Rhododendron, Rhodora, Ledum, Loiseleuria, Leiophyllum.
Berberidaceae.—36, Mahonia; 37, Berberis.
Caprifoliaceae.—38, Diervilla; 39, Symphoricarpus; 40, Lonicera; 41, Leycesteria; 42, Viburnum; 43, Sambucus.
Rubiaceae.—44, Cephalanthus, Gelsemium.
Calycanthaceae.—45, Calycanthus, Chimonanthus.
Tamariscineae.—46, Tamarix.
Cornaceae.—47, Cornus, Benthamia, Nyssa, Garrya.
Araliaceae.—48, Aralia, Hedera.
Malvaceae.—51, Hibiscus.
Jasminaceae.—52, Jasminum.
Oleaceae.—53, Ligustrum, Olea, Chionanthus; 54, Syringa, Fontanesia, Forsythia; 55, Fraxinus, Ornus, Forestiera.
Sapindaceae.—56, Aesculus, Staphylea, Koelreuteria; 57, Acer, Negundo.
Urticaceae.—58, Ulmus; 59, Morus, Maclura, Broussonetia, Ficus; 60, Celtis; 61, Planera.
Rhamnaceae.—62, Rhamnus, Frangula, Sageretia, Berchemia, Zizyphus, Ceanothus, Paliurus.
Compositae.—63, Baccharis, Iva, Artemisia.
Verbenaceae.—64, Callicarpa, Vitex.
Asclepiadaceae.—64, Periploca.
Leguminosae.—65, Cytisus; 66, Laburnum; 67, Gleditschia; 68, Gymnocladus; 69, Cercis; 70, Robinia; 71, Genista, Sarothamnus, Ulex, Spartium, Ononis; 72, Cladrastis; 73, Albizzia; 74, Caragana; 75, Amorpha; 76, Wistaria; 77, Sophora, Colutea.
Anacardiaceae.—78, Rhus, Pistacia.
Coriarieae.—79, Coriaria.
Camelliaceae.—79, Stuartia, Gordonia.
Simarubaceae.—80, Ailanthus.
Ebenaceae.—80, Diospyrus.
Meliaceae.—81, Melia.
Sterculiaceae.—81, Sterculia.
Rutaceae.—82, Zanthoxylum, Ptelea.
Bignoniaceae.—83, Bignonia, Tecoma, Catalpa.
Scrophulariaceae.— 83, Paulownia, Buddlea.
Lauraceae.—84, Laurus, Persea, Sassafras, Lindera, Tetranthera.
Aquifoliaceae.—85, Ilex, Myginda, Nemopanthes.
Myricaceae.—90, Myrica, Comptonia.
Thymeleaceae.—91, Dirca, Daphne.
Coniferae.—92, Pinus, (Ternatae;) 93, Pinus, (Quinae;) 94, Pinus, Binae;) 95, Larix, Pseudolarix; 96, Picea Bracteata; 97, Picea Brevebracteata; 98, Cedrus; 99, Sequoia, Sciadopitys, Cunninghamia; 100, Cryptomeria, Taxodium, Glyptostrobus; 101, Buxus; 102, Retinospora; 103, Biota, Thujopsis; 104, Cupressus; 105, Thuja, Libocedrus; 106, Abies, (Verae;) 107, Tsuga; 108, Pinus, (Dubae;) 109, Taxus; 110, Torreya, Cephalotaxus; 111, Salisburia; 112, Juniperus, (Oxycedrus;) 113, Saxe-Gothaea, Nageia, Araucaria; 114; Juniperus, (Sabinae;) 115, Juniperus, (Cupressoides.)

A. Department Building
B. Stabling and Yard
C. Tropical Fruit House
D. Houses for Orange, Lemon, and other Semi-Tropical Fruits
E. Houses for Miscellaneous Collections of Utilizable Plants
F. House for Collection of Foreign Grapes
G. Gate-House
H. Experimental Orchards
K. Experimental Grounds

Source: Report of the Commissioner of Agriculture, Washington, Government Printing Office. 1870.

In addition to arranging plants by their botanical affiliation, Saunders exhibited plants with similar economic functions. In his report to the Commissioner of Agriculture in 1869, Saunders cites a prominent "collection of plants useful in the [practical] arts" on the grounds, including "dye, gum, sugar, fiber, oil, and medicinal plants" (U.S. Department of Agriculture 1869, 91). He expressed great enthusiasm for displaying plants with economic applications, stating that "[w]e cannot overestimate the benefits that must necessarily result from a collection of plants whose products are of commercial value in the arts, manufactures, and medicine. The mere exhibition of such collections, when systematically arranged, is productive of much good" (U.S. Department of Agriculture 1869, 18).

To Saunders, the arboretum was not simply utilitarian, however. It also expressed "artistic discrimination" and was meant to cultivate "the love of rural life [and] a desire for the study of botany and vegetable physiology" (U.S. Department of Agriculture 1868, 12) in every person who visited the grounds. The arboretum was to serve as an example of "effective landscape gardening and pleasure ground scenery, [exhibiting] a strictly geometrical flower garden" to exemplify the style as "a fitting accompaniment to a large building" (William Saunders to Commissioner of Agriculture Horace Capron, January 13, 1868, National Grange of the Patrons of Husbandry records). Saunders wished the garden to influence visitors to the arboretum, so that they might spread contemporary ideas of beneficial agricultural practices and tasteful landscape design to their own communities.

Saunders imagined that the arboretum would be beneficial to a wide spectrum of the public, from artists who could study "the form of every leaf and outline of the superior vegetation of the temperate zones" to botanists who could "find the material living presence of those objects which…enter into his abstract and recondite arrangements" (William Saunders to

Commissioner of Agriculture Horace Capron, January 13, 1868, National Grange of the Patrons of Husbandry records). His love for this landscape is evident in his personal writings. Reflecting on the landscape of the Mall, while looking over the Potomac River, Saunders writes that

> [t]he poetical mind will reflect upon its river existence, and trace it to its brooklet source in some 'sequestered nook,' from which it emerges and meanders in the open light, refreshing itself by an occasional dip under a shady bank, and again sparkling in the sun; or, as it frets and foams down the rocky cataract indistinctly visible through the gloom of a wooded canopy, until as it nears the haunts of man, it expands its proportions and assumes the appearance of placid maturity—a fitting emblem of human progress. (Saunders 1899)

This expressive bit of prose, tucked into an otherwise straightforward description of the Washington park system, illustrates Saunders' empathetic relationship with nature, a relationship he wished to awaken in visitors to the arboretum.

The arboretum became a popular tourist destination in the late nineteenth century, as evidenced by the large number of stereoscopic souvenir slides (Figures 5.5-5.10) produced during that time. Primarily showing the formal flower gardens, and Adolf Cluss' Administration Building, the slides are an excellent record of the lost garden's character and composition.

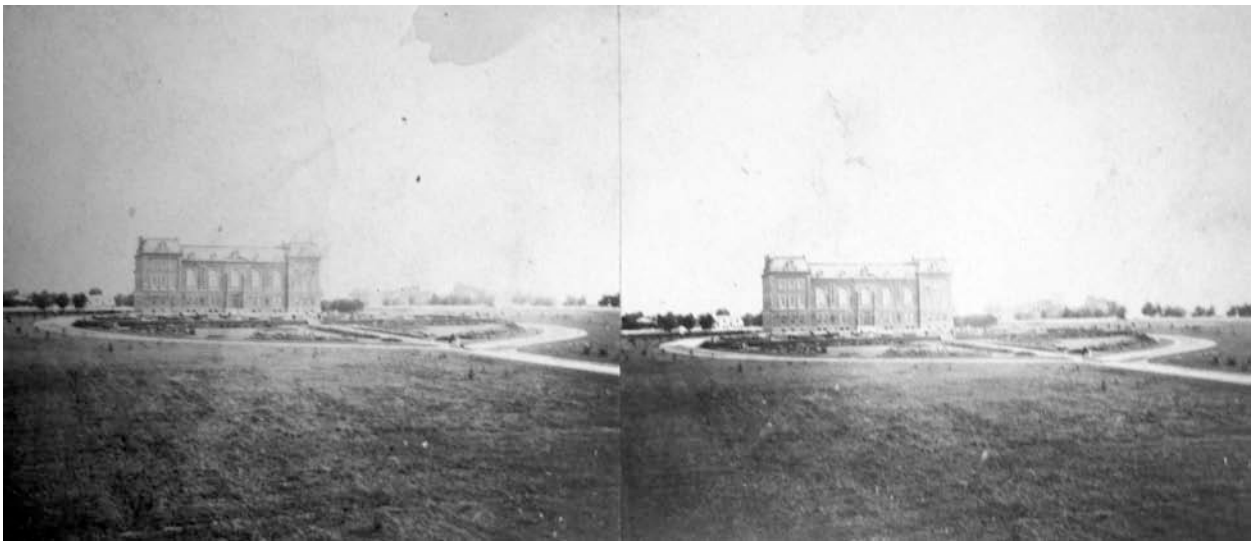


Figure 5.5—Stereoscopic view looking south, showing Adolf Cluss' Administration Building, shortly after its completion in 1868 (National Grange of the Patrons of Husbandry records, Cornell University Library).

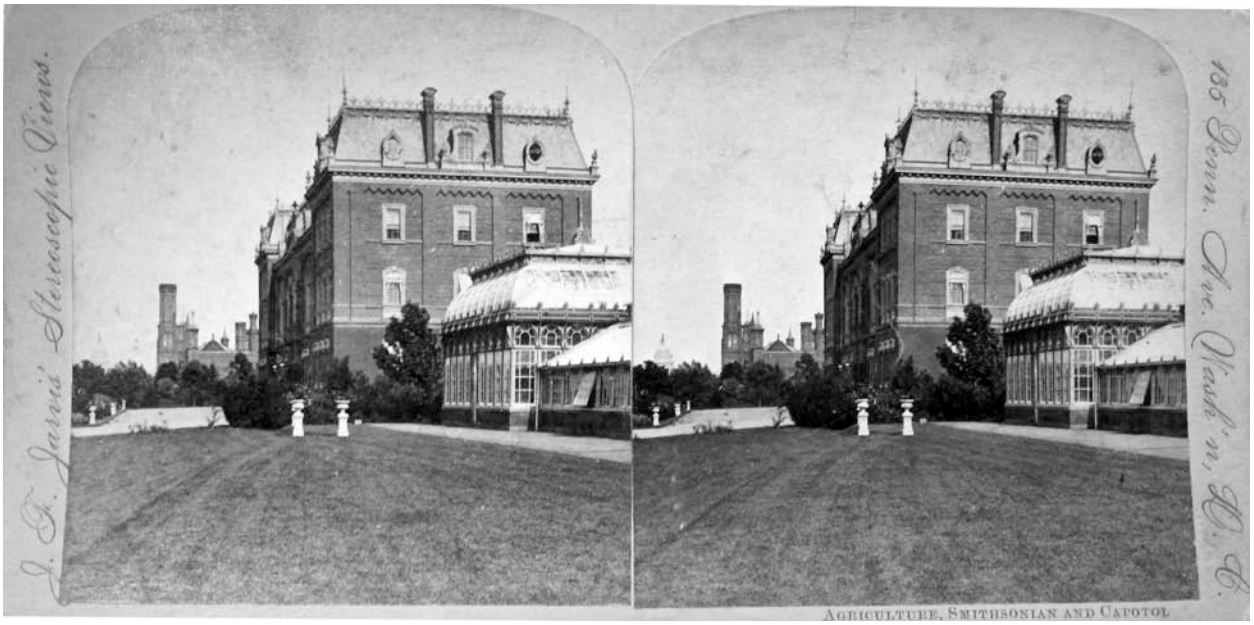


Figure 5.6—Stereoscopic view looking east, showing the Semi-Tropical Fruit House and Administration Building. The Smithsonian Castle can be seen in the background (Stereo Cards of USDA Buildings and Grounds in Washington, DC, National Agricultural Library).

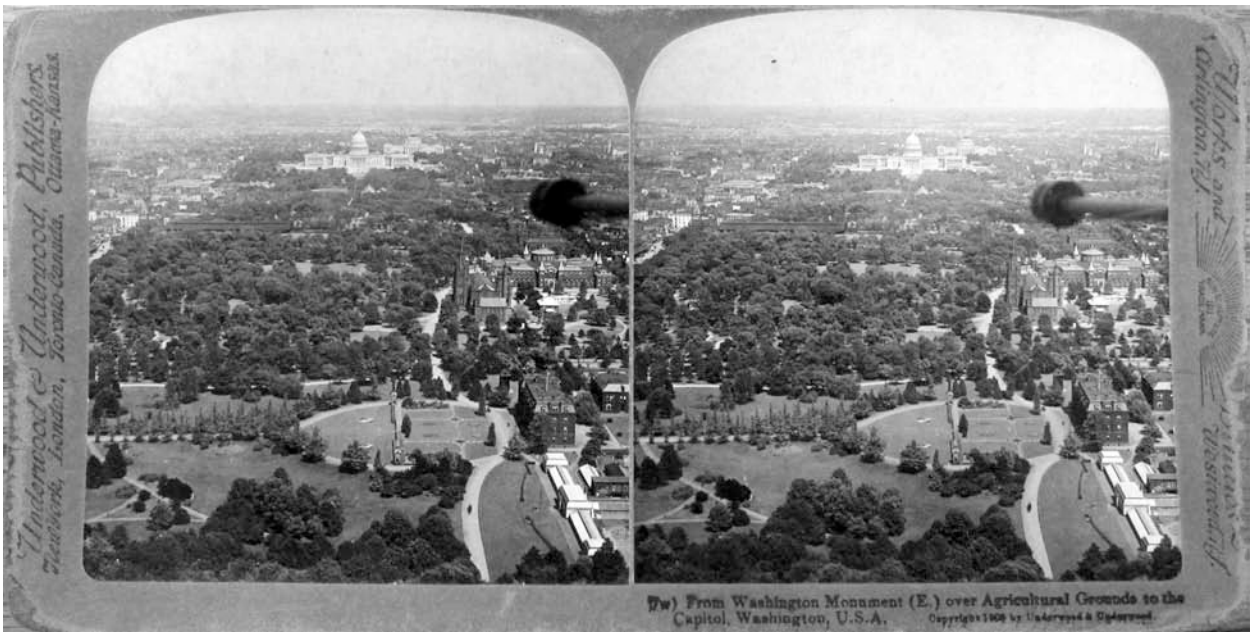


Figure 5.7—Stereoscopic view looking east toward the Capitol, showing the mature character of USDA's arboretum (Stereo Cards of USDA Buildings and Grounds in Washington, DC, National Agricultural Library).

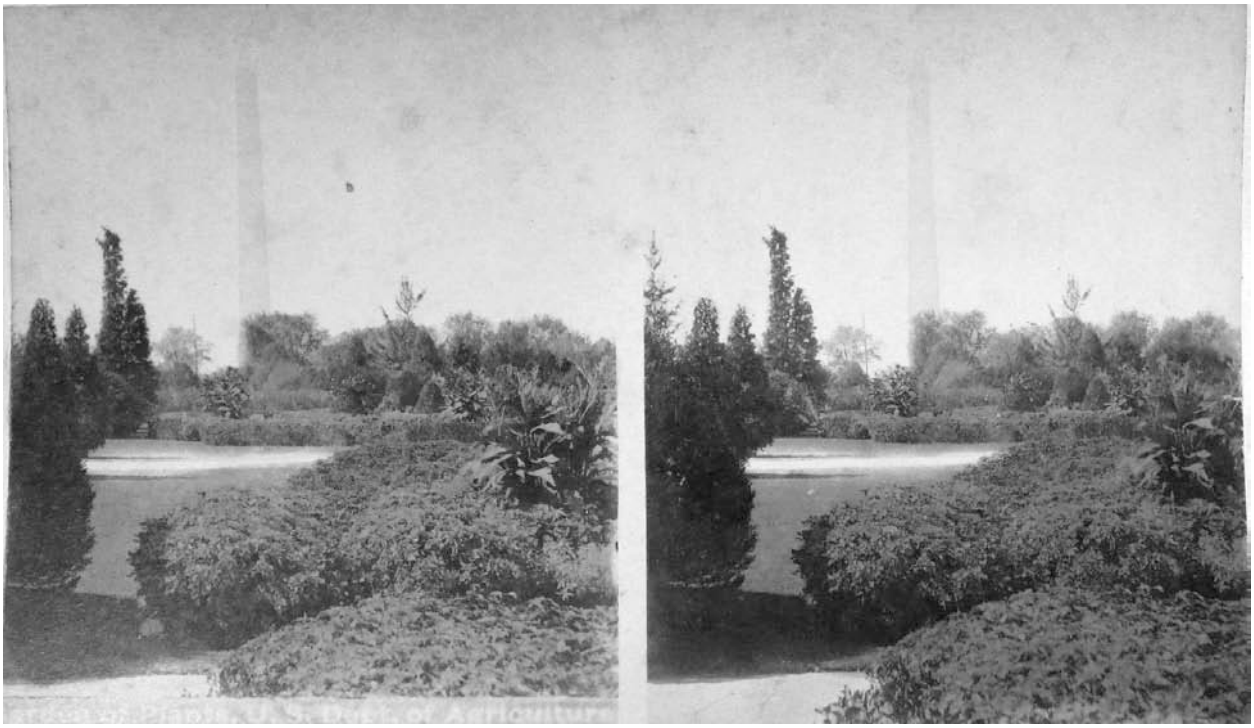


Figure 5.8—Stereoscopic view looking west, showing plant displays. The Washington Monument can be seen in the distance (Stereo Cards of USDA Buildings and Grounds in Washington, DC, National Agricultural Library).

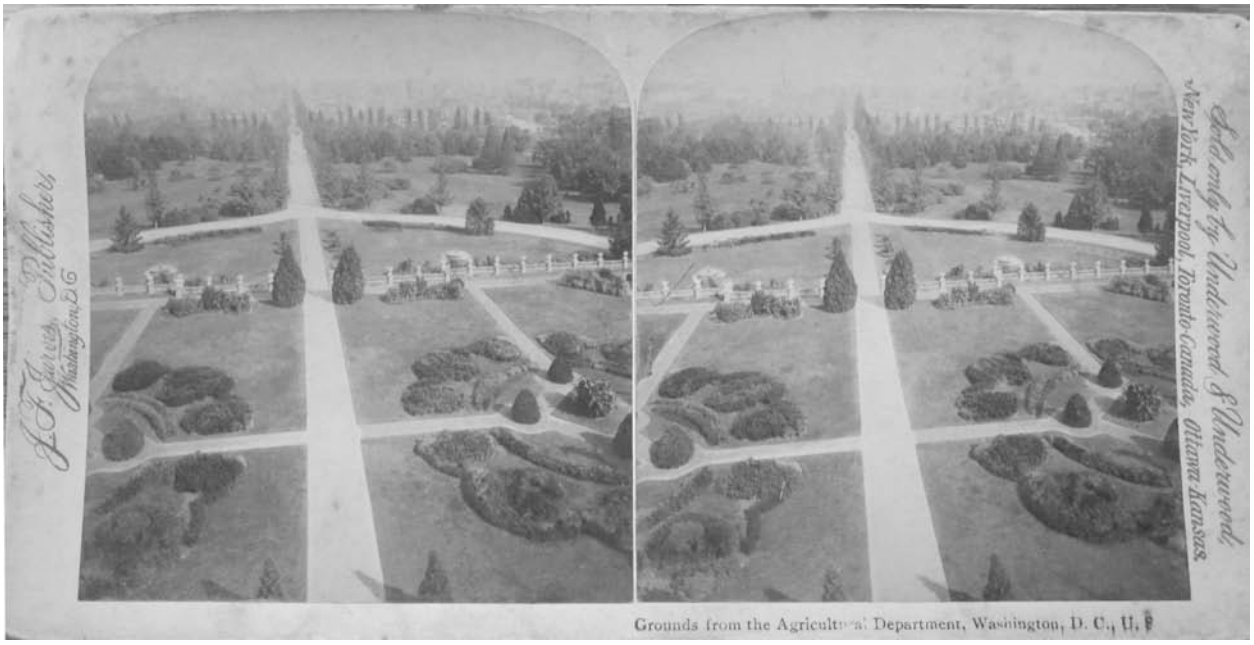


Figure 5.9—Stereoscopic view looking north, showing the formal flower gardens and arboretum beyond (Stereo Cards of USDA Buildings and Grounds in Washington, DC, National Agricultural Library).

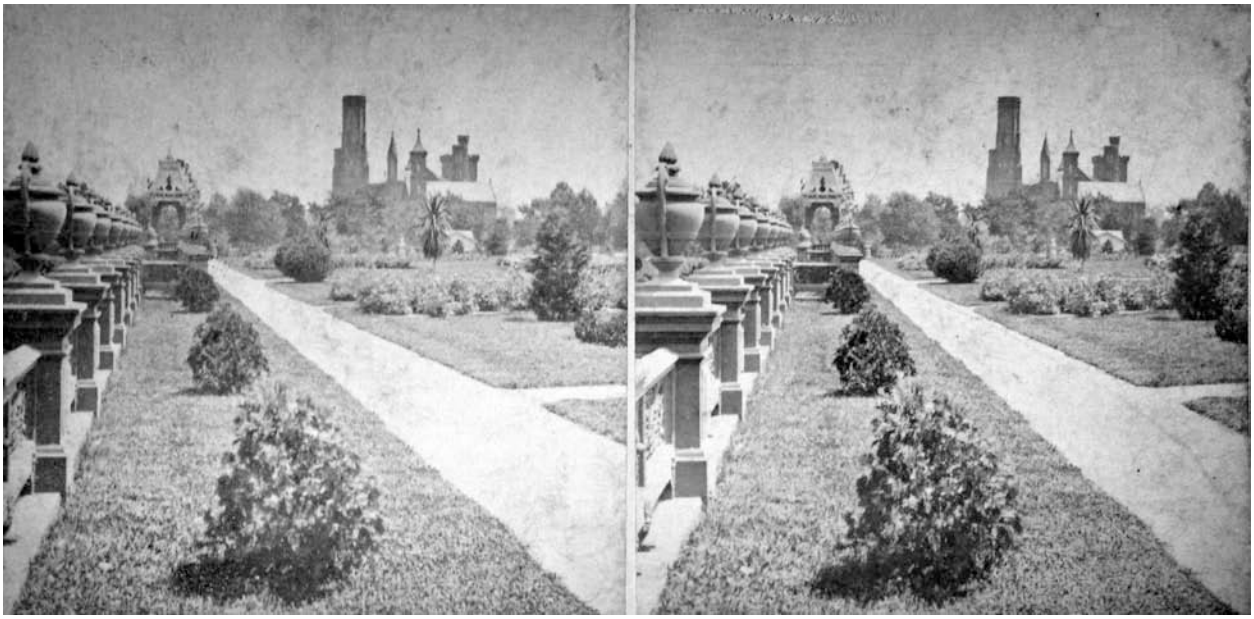


Figure 5.10—Stereoscopic view looking east, showing the terrace balustrade, which served as a threshold between the formal flower gardens and the arboretum (Stereo Cards of USDA Buildings and Grounds in Washington, DC, National Agricultural Library).

Upon William Saunders' death in 1899, the grounds were transferred to the care of another division within the department. However, with the acquisition of larger experimental grounds in Arlington more suited to scientific study, and the introduction of the McMillan Plan in 1900, the inevitable demolition of the arboretum became apparent and attention turned to expanding laboratory and administrative facilities for the Department, which had swiftly outgrown Cluss' building and required much more space.

The New Administration Building, 1901-1930

At the turn of the century, the USDA was in dire need of new facilities. As an institution largely concerned with scientific study, the lack of adequate laboratory space was especially pressing. Although the Department had asked repeatedly for appropriations to construct new buildings, it was not until 1901 that Congress designated funds for this purpose. The design of a new headquarters on the Mall was to include new laboratory space as well as expanded office space, and the old, much maligned, Cluss building on the Mall was to be razed. 1901 was also the year that the McMillan Commission released its plans for the development of Washington's ceremonial core. Although there was no argument whether or not the Department should retain its place on the Mall, there was much political and architectural squabbling about where on the forty-acre reservation the new facilities should be built (Dalrymple 2006). Although a detailed account of the blow-by-blow fight over the location of the new building's footprint is beyond the scope of this thesis, an excellent account of this political melodrama can be found in Dana Dalrymple's chapter "Agriculture, Architects, and the Mall, 1901-1905: The Plan is Tested" in the book *Designing the Nation's Capital The 1901 Plan for Washington, D.C.*

The USDA used the funds from Congress to hold a design competition in 1901, despite the fact that no site for the building had been finalized. Charles McKim, a member of the

McMillan Commission, recommended that the site be "South and rear of the present building in order to conform with the proposed avenue which will form part of the scheme upon which we are to report" (Dalrymple, 2006, 213). Although this was the site eventually chosen for the new buildings, several years of political fighting preceded groundbreaking. Many politicians at the time were opposed to implementing the McMillan Plan. Speaker of the House, Joseph Cannon was quoted as saying that "he would rather see the Mall sown in oats than treated as an artistic composition" (Dalrymple 2006, 216). Opposition to the McMillan Plan even reached the USDA officials in charge of the project. B. T. Galloway, chief of the Bureau of Plant Industry, and head of the USDA's Building Committee, proposed siting the building in the middle of the Mall, writing, "we offer no suggestions in regard to the so-called boulevard or parkway, believing that this is a matter which does not really need serious attention at the present time" (Dalrymple 2006, 219).

After three years of political wrangling over site selection and building design, the Senate Public Buildings Committee heard testimony from the McMillan Commission and unanimously upheld the recommendations of the Commission in the construction of the new agriculture building in 1904. The legislation stalled in the House, however, and it took the personal intervention of President Theodore Roosevelt to finally end the debate and force the construction of the building in accordance with the McMillan plan (U.S. General Services Administration 1964, 11; Dalrymple 2006, 232). Rankin, Kellogg & Crane submitted construction drawings for the building, and ground was broken in December of 1904. The political turmoil did not end there, however. Charles McKim, upon inspecting the site in early 1905, grew concerned that the building was not centered between Twelfth and Fourteenth Streets and voiced these concerns to the administration. Although the late changes to the building already in progress cost an

additional $36,000, the President decided to follow McKim's recommendations, but not before fiercely dressing down the architect for so belatedly making these concerns known. Upon being congratulated on his victory after the White House meeting by Secretary of War William Taft, McKim was quoted as saying, "Was it a victory? Another such, and I am dead" (U.S. General Services Administration 1964, 12).

Although ground was broken, and construction started, the funds appropriated by the House were insufficient to construct the entire new building. Secretary of Agriculture, 'Tama' Jim Wilson had asked for $2,500,000 for an elaborate classical design. The House Appropriations Committee, however, favored a more frugal design using terra-cotta and brick, and appropriated only $1,500,000 for the new building. Secretary Wilson, not to be dissuaded, was quoted as saying, "I am going to have a good building, or none at all" (Dalrymple 2006, 217). In a wily political move, the Secretary used the funds to construct only the wings of the elaborate, classical administration building, leaving a gaping hole in the composition, which would require more funding from Congress to fill (Figure 5.11). Summoned before Congress to answer for his breach of protocol, Secretary Wilson was soundly rebuked, but he denied breaking the law, saying that the needs of the department had changed since the original appropriation (Sapp 1965, 4). The space between the wings was filled with flowers and used for parking until Congress finally made another appropriation to fill the gap more than twenty years later, in 1930 (Figures 5.12 & 5.13). Subsequently, the Department ceded the majority its grounds to the National Park Service to be graded and planted in accordance with the McMillan Plan (Fanning 2006, 18, 64).

Figure 5.11—Aerial view of the Mall c. 1910. The gap between the wings of the new Administration building is evident in this photo (Olmsted, Arthur J. Collection of USDA Photographs, National Agricultural Library).

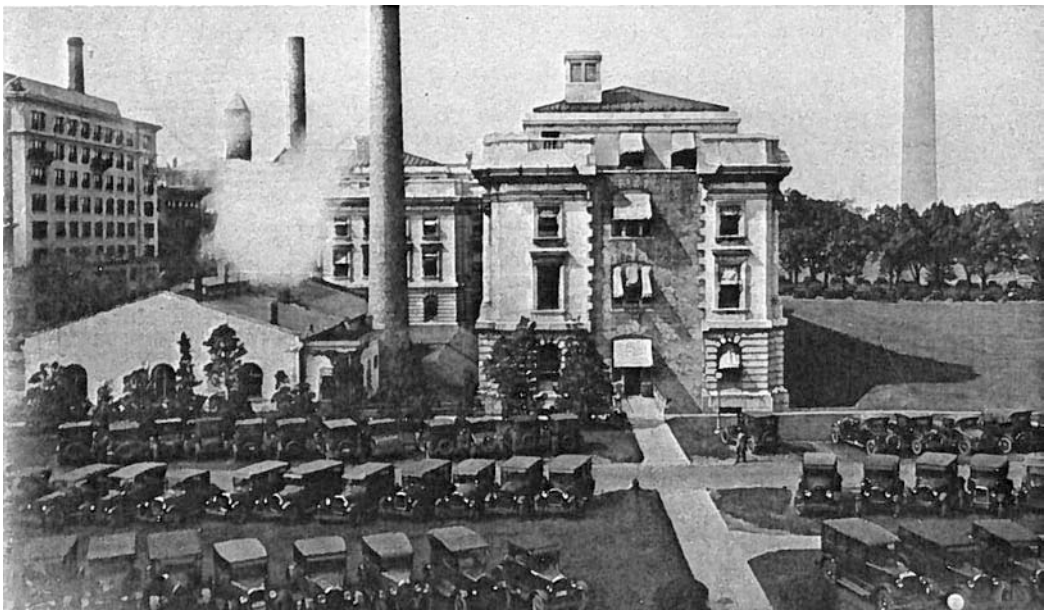


Figure 5.12—View west from the east wing of the new administration building, showing parking between the wings and the Washington Monument in the background (U.S. General Services Administration 1964).

Figure 5.13—Aerial view of the Mall c. 1936. The Whitten Building is complete, and work has begun on implementing the McMillan Plan (Olmsted, Arthur J. Collection of USDA Photographs, National Agricultural Library).

Although the political efforts involved in constructing the USDA Administration Building, now called the Whitten Building, were contentious and bellicose, the new building legitimized the McMillan Plan as the principle working master plan for the District, and established the Department's place on the Mall as its permanent residence.

The People's Garden Initiative, 2007-Present

Once new facilities were constructed, and the National Park Service assumed control of the Mall, the USDA shifted its focus away from its historic grounds. The land around the Whitten building was used mostly for parking, with the northern third planted and maintained as a park-like landscape, and it remained that way, with few major additions for over sixty years. In 2007, the Department began to consider converting the grounds around the Whitten Building into a showcase garden promoting sustainable landscape practices. This new design would restore the USDA's historic role in educating the public by taking advantage of its prime location on the National Mall.

At the time, the grounds of the Whitten Building were a poor reflection of the policies of the Department. The grounds contained unhealthy shrubs, harbored many invasive plant species, and encompassed significant areas of impermeable surfaces (McIntyre 2008, 48). Whereas the several agencies within the Department were promoting and incentivizing good land stewardship so as to improve agricultural output and protect natural resources, their own headquarters came up short in demonstrating these very practices.

In an effort to glean ideas and build momentum around the implementation of a sustainability demonstration garden, Matt Arnn and Robert Snieckus, leading landscape architects with the Forest Service and the Natural Resources Conservation Service respectively (both are agencies within the USDA), conducted a *charette* involving designers, USDA

employees, members of the public, and students. To get the design teams started, Arnn and Snieckus created a list of goals for the new sustainability garden. Drawing from emerging and established principles of sustainable landscape design, the new showcase garden would

1. Reduce stormwater runoff with rain gardens, green roofs, and bioretention practices.
2. Create new habitat with pollinator gardens.
3. Educate the public with interpretive signage and interactive features.
4. Reduce maintenance costs with high-performing native plants.
5. Feature USDA agencies with thematic elements and plants.
6. Improve the visual quality of the headquarters landscape.
7. Provide learning opportunities for children.
8. Organize and provide for a living memorial to people and events important to USDA's history and mission on site.
9. Enhance farmers' market operations and site integration. (McIntyre 2008, 48)

After the charette, Arnn and Snieckus developed the ideas into a concept plan for the grounds (Figure 5.14). This initiative, however, would become much bigger than the six acres surrounding the Whitten Building.

In 2009, Secretary of Agriculture Tom Vilsack, under the Obama administration, broke ground at the southwest corner of Fourteenth Street and Independence Ave, SW to start the first phase of the initiative, an organic vegetable garden, and called upon USDA offices worldwide to do the same (Layton 2010). Borrowing from Abraham Lincoln, who called the Agriculture Department the "People's Department" when it was created in 1863, Vilsack named the new initiative the "People's Garden Initiative," and touted it as a way to make the mission of the department visible and to lead by example. This would become the first step in recreating the USDA's grounds as a demonstration landscape where the public could see and experience sustainable landscape practices in action. The landscape was also selected as a pilot project for the Sustainable Sites Initiative, a sustainability rating system for outdoor environments currently under development.

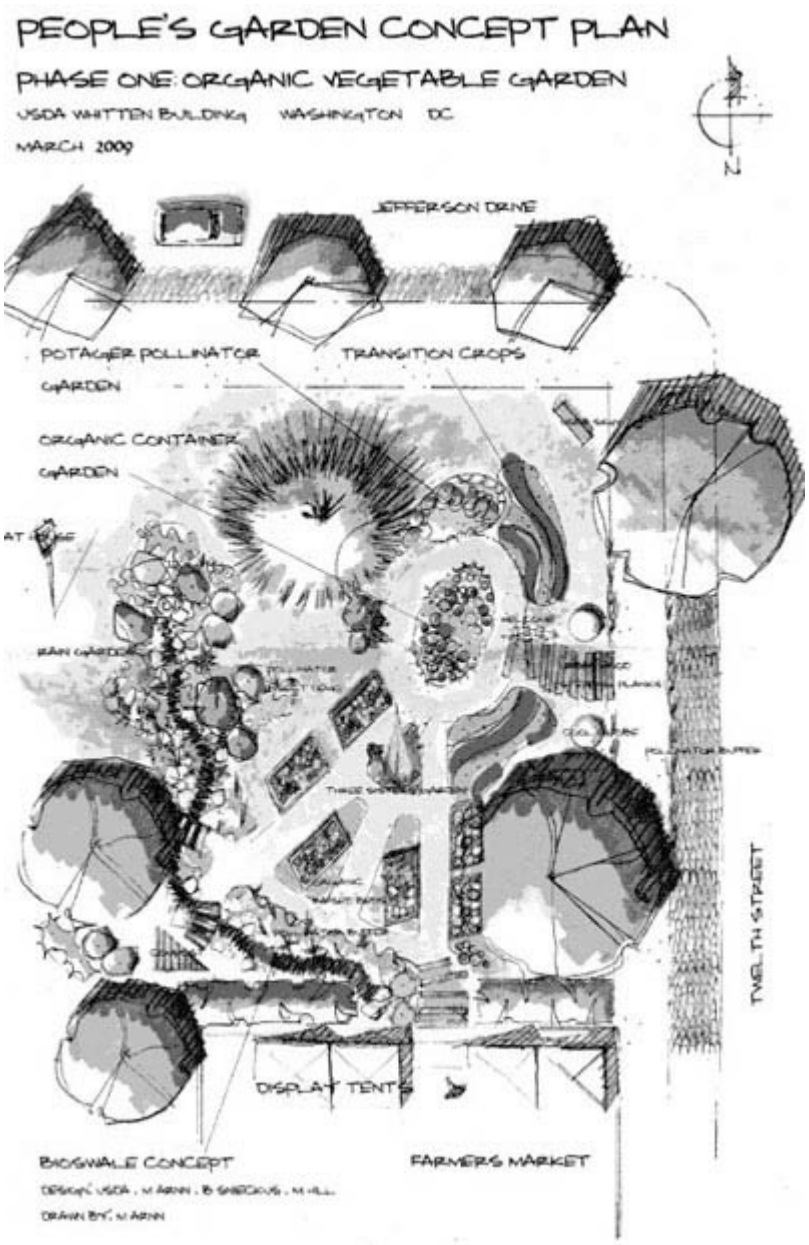


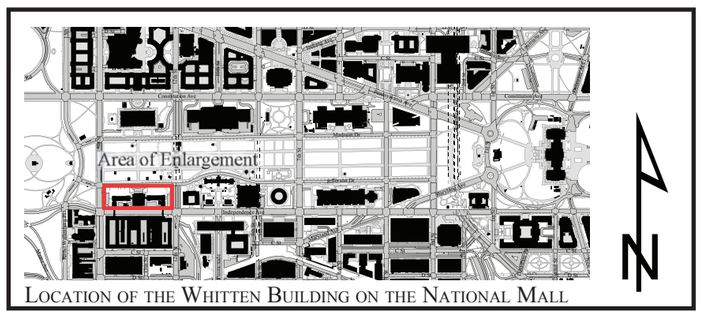
Figure 5.14—Concept plan of phase one the People's Garden, drawn by Matt Arnn (courtesy USDA)

Since ground was broken for this garden, momentum behind this project has grown. At the time of this writing, there were twelve hundred People's Gardens worldwide. However, the new sustainability garden on the Mall has yet to meet the approval of the Commission of Fine

Arts (CFA), and the National Capital Planning Commission (NCPC), the agencies charged with stewarding the Mall in accordance with the vision of the McMillan Commission.

The USDA is currently working on a master plan for the entire site (Figure 5.15), which is to include rain gardens, native plants, and pollinator habitat, in addition to the organic vegetable garden. If executed effectively, this garden will engage visitors both aesthetically and intellectually, spreading ideas of ecological and social responsibility within a heritage context while having a measurable positive impact on the ecological functionality of the Mall itself.

Figure 5.15— Existing conditions of the USDA headquarters and grounds on the National Mall, Plan by the author. Not to scale.



LOCATION OF THE WHITTEN BUILDING ON THE NATIONAL MALL

Conclusion

With the creation of the People's Garden Initiative, and plans to develop the grounds into a new garden that will demonstrate principles of sustainability, the USDA has an opportunity to build the kind of heritage described in Chapter 4: a heritage that acknowledges and celebrates our cultural relationship with the natural world. Not only is this project an opportunity; it must be seen as a responsibility. As an institution that was created to protect the still-developing agricultural economy of the mid-eighteenth century, the USDA holds a public trust to steward our agricultural resources, which it does through a wide variety of programs and agencies. By starting a garden that represents a heritage of sustainability on the National Mall, it is taking another step in the fulfillment of this responsibility. This garden will be a powerful indicator that the built heritage on the Mall is entering a new phase of development by promoting values not just related to cultural heritage, but to natural heritage as well. The garden is far from finished, however, and faces more obstacles before it can reach completion. The CFA and NCPC have yet to approve a final master plan, and they are under no obligation to do so. They must be convinced of the need and value of such a garden. By synthesizing the theories of heritage and sustainability, this thesis advances the USDA's position in this endeavor.

The USDA has a rich history from which to pull when creating continuity between its past and the future, as this chapter has shown. The history that William Saunders offers to this project is of particular interest. Though he did not think of sustainability in exactly the same way it is understood today, he incorporated several of Norton's principles of sustainability in the management of both the Propagation Gardens and the USDA Arboretum.

First, he actively managed the gardens *experimentally*, meaning that he did not presuppose which plants or practices would achieve desired results. Instead, he used

experimentation and close observation to learn what did and did not work, incrementally reducing uncertainty within the systems he was managing. Everything he did in the garden was aimed at uncovering new knowledge and patiently learning the economic potentials of all manner of plants, from hedgerows and flowers, to fruits and vegetables.

Second, he thought of these gardens as nested within *multiscalar systems*. His thoughts on composting refuse from urban centers to enrich the natural systems upon which those urban centers depended for survival shows a creative intelligence and systems approach to thought. In his report of 1891, Saunders even went so far as to suggest the installation of a rainwater-harvesting system for use on young plants in his greenhouse setting (U.S. Department of Agriculture 1891, 466). This integration of natural process with economic process is another indication of his systems approach to management.

Third, he constantly corresponded with the public on a global scale. His projects in discovering new, more productive crop varieties required both the active acquisition of promising cuttings, rootstock, and seeds from the public; as well as distributing the best stock back to the public for economic testing. Incidentally, it was Saunders who introduced the Navel orange to the United States through his experimental gardens on the Mall, which is arguably one of the most economically important fruits in agricultural production today (Saunders 1899).

Lastly, Saunders used the gardens and arboretums to instill ecological *values* in the public, inculcating a culture that felt love toward natural systems and desired to learn more about them. He accomplished this by using *aesthetics* in the design of his gardens, arranging the grounds to both educate and display good taste. In these ways, Saunders was truly ahead of his time, exemplifying the deep principles of adaptive management and sustainability.

CHAPTER 6

CONCLUSION

As the National Mall stands today, few places exist where an ecological inheritance takes is rightful place alongside America's cultural heritage. As a long-lived institution designed to protect the nation's food supply and agricultural economy, the USDA has a long history of protecting natural systems important to sustaining and expanding agricultural operations. This history has roots within the landscape of the National Mall itself, when the Department operated extensive experimental gardens at the foot of the Washington Monument in the nineteenth century. Today the Department is in a unique position to pull from its historical condition on the Mall, to produce a heritage that promotes sustainability not just as a natural inheritance, but a cultural one as well. This garden is not something that is merely desirable; it is in fact a garden of necessity. If we wish our culture to endure into the indefinite future, an obligation exists to protect the natural systems that sustain it, the knowledge of how to care for them, as well as a culture that values them. This is no small task. By intervening in the creation and production of national heritage, there is an opportunity to incorporate principles of sustainability into the collective national identity of citizens through the transformative power of a garden.

This thesis has outlined two arguments for the incorporation of sustainable landscape practices into the grounds of the USDA headquarters on the National Mall. First, an argument grounded in the theories of heritage and sustainability reveals that the two concepts are similar in many ways. By creating *continuity* between the past and a projected future, requiring *choices* in the present about what to save for the future and *dedicated action* to ensure those systems'

survival, as well as befitting from the *participation* of the public, both heritage and sustainability have important roles to play in the survival of future generations. Second, an argument grounded in the past condition of the USDA grounds, as managed by William Saunders, serves as a real example of how heritage and sustainability have been combined in the past. Sustainable landscape practices were both demonstrated and encouraged on the National Mall in the late nineteenth century. Archival research reveals a national landscape that attempted to inculcate a love and respect for the natural systems upon which the national culture relied.

Today, the nation, and indeed the world, is faced with unprecedented challenges as ecological systems strain to meet the needs of growing urban populations. In order to survive in the future, communities must take responsibility for *becoming* sustainable. As shown in Chapter 2, heritage is used to create identity, promoting ideas of what people should *become*. The National Mall is an effective vehicle for instilling cultural values. Now those who steward the Mall must work to include ecological values as well. The USDA's efforts to do this should be encouraged and supported as an important step in incorporating these values into the national identity. The symbolism in the Mall has helped *create* America, now it must help *sustain* America by layering ecological awareness into the national identity.

In order to truly be effective, however, the USDA garden must incorporate the deep principles of sustainability and heritage, beyond simple programmatic elements. Six guiding principles for the development and design of such a garden are proposed, based on the definitions of heritage and sustainability.

First, the garden, in spite of its national profile, should work to sustain *local* systems, that is, systems that impact the residents and workers of the District of Columbia. Any effort toward sustainable living must be firmly anchored in a place-based view of and response to a given

problem. By demonstrating its local impact to a national audience, the garden can reinforce localism and community as part of the national identity. If successful, this local aspect will encourage visitors to think about their own communities and the ways in which they can have a local impact.

Second, the garden should connect the local interventions to larger systems in a regional context. The systems being managed should always be thought of as components of larger systems, and as composed of smaller systems. This hierarchical multiscalar thinking should help people draw connections between the interventions made on the site and the larger systems the site supports. This can be accomplished through interpretation. For example, the small rain garden impacts the Potomac River, which has an impact on the Chesapeake Bay. Making these nested scales visible in the garden allows visitors to understand the how small interventions add up to impact large complex systems.

Third, the garden should acknowledge the existence of the uncertainty that pervades natural systems, and use experimentation to incrementally reduce that uncertainty. The urban environment, and the National Mall in particular, has its own particular uncertainties, among which are problems of contaminated and compacted soils, limited habitat, rainwater infrastructure, and social justice. By selecting one or more of these uncertainties, and monitoring and interpreting the impact of site-scale interventions, managers can begin to move toward certainty when making recommendations and management decisions on other sites. For example, managers of the garden can decide to reduce uncertainty in urban pollinator biodiversity by measuring which species of bee exist before a pollinator garden is installed, and comparing that to the species that exist after installation, thereby increasing knowledge of how management interventions impact pollinator habitat. If this experimentation is interpreted, it

leads to social learning not only among the garden managers, but among visitors as well. In short, managers should acknowledge that they do not, indeed cannot, know everything, so land management is a learning exercise.

Fourth, the garden should connect itself to the national heritage by drawing from elements of the past. In order to present the interpretive content of the garden as a cultural and natural *continuity*, the origin of this inheritance must be traced back. If the heritage presented is convincing, the garden, and its principles of sustainability, will be legitimized, consumed, and incorporated into the national identity. These elements may include references to William Saunders' experimental gardens. These lost gardens are of particular significance in that they constitute past place-specific constructed elements related to the perpetuation of natural and cultural systems. References can also be made to specific historic figures who made contributions to the concept of sustainability, such as Aldo Leopold, or those who advocated for an agrarian existence, such as Thomas Jefferson. No matter what form these connections take, it is important to connect this garden to cultural inheritances from the past so that continuity can be created.

Fifth, the garden should consider the diversification of cultural inheritances in the garden. As we have seen, the United States is a nation of many different types of identity, and the national civic identity is just one of these. If the USDA weaves other kinds of identity into the garden, such as ethnic or regional identities, its message will become personally accessible to more people. The incorporation of food crops presents a great opportunity to accomplish this. People identify with food, and the United States has a rich diversity of both native and immigrant groups, each with their own crops and culinary traditions. One way in which the garden may

capitalize on this is by diversifying the varieties of crops grown, or interpreting them as culturally or regionally specific.

Sixth, the garden must present an immersive aesthetic experience that conforms to its formal context. If meaningful aesthetic experiences have the power to transform and inculcate values in people, then care must be taken to "frame" sometimes-unruly ecological processes in orderly forms, meeting the public's expectations for a public garden on the National Mall. This can be done by responding to the forms and materials that already exist in this landscape, such as the USDA headquarters building itself, or the cross-axial relationship that exists with the National Museum of American History. In any case, human care and intention *must* be evident in the final product in order for the public to have a positive response and incorporate its principles into their individual identities.

The People's Garden Initiative has already taken important first steps in realizing at least two of the principles listed above: localism and cultural diversification. The organic vegetable garden supplies food to DC Central Kitchen, a Washington, DC soup kitchen that doubles as a chef training school for at-risk individuals. In so doing, the garden helps address local social problems of hunger, chronic homelessness, addiction, and poverty. In exchange, the DC Central Kitchen periodically provides workshops, free tastings, and recipe cards in the organic vegetable garden. This is just one way the USDA engages with the local community through the garden. Public workshops on everything from bees to school gardens are held in conjunction with a popular Farmer's Market every Friday from May through September. As one of the few sources of food on the Mall, the Farmer's Market is always popular with tourists and government employees alike. Furthermore, USDA employees maintain the organic vegetable garden through a volunteer program, which also engages local community gardens, providing much-needed

supplemental labor to understaffed not-for-profit garden organizations throughout the city. The garden has even started to become an outdoor meeting venue for agencies within the Department who want a change of scenery.

The vegetable garden also embraces a diversity of cultural identities. Regional identity is woven into the garden through the cultivation of place-specific crops. In the summer of 2010, New Mexico chile peppers were grown in the garden, specifying and incorporating a regional identity through one of its primary crops. Events are also periodically held that celebrate a specific crop, season, or place.

By incorporating the principles listed above, the new sustainability garden can present a palimpsest of sorts, simultaneously displaying the principles of sustainability with the functions of heritage on the National Mall. Although this thesis focuses on the Mall, the theoretical synthesis can be extracted, expanded, and used to progress efforts elsewhere to incorporate sustainable practices in landscapes that are managed for their heritage value.

The National Mall does not, as of today, meet the obligation to impress the value of natural inheritances onto future generations, though there is evidence that this ethic used to be a powerful force on the Mall. L'Enfant envisioned a broad avenue flanked by gardens of differing characters, Downing wished to use the landscape of the Mall to instill horticultural and agrarian values in the public, and the USDA designed and operated experimental gardens and a national arboretum to learn and spread knowledge about agricultural practices.

There is also evidence that this ethic is beginning to re-emerge in the smaller, more human-scaled spaces within the Mall. The National Museum of the American Indian's ethno-botanical garden, as well as the US Botanic Garden's West Showcase Garden are two such examples, which both promote an integration of cultural and natural systems (Hammat 2002,

Courtenay 2004). These both represent initiatives to reshape the cultural, or heritage, content of the Mall to address natural systems as well. The bulk of the Mall, however, remains an ecologically dysfunctional landscape of uniform tree and plant species, dying turf, compacted soil, and stagnant water.

Heritage landscapes like the National Mall exist because those who lived in the past considered a certain person, place, event, or idea worthy of passing to the next generation. Thus the creation of a national identity was promoted through a built heritage present in the landscape. Are the normative principles of sustainability, or the very actions that will ensure human survival, worthy of passing on to future generations? This author hopes that the answer is yes. When the principles of sustainability are made visible in built form on the National Mall, its stature is elevated to reflect a social discourse on resource scarcity, ecological function, public health, and social justice at a national scale. By learning from its legacy of sustainable principles and extending that legacy into the future, the USDA can produce a truly comprehensive heritage: one that moves people toward a greater respect and admiration for natural, as well as cultural, inheritances.

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