

Governing Certain Things: The Regulation of Street Trees in Four North American Cities

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Most sociolegal studies of the urban street focus on the human element.¹ By focusing on the tree, this Article offers a unique perspective on the interrelations between various actors within the public spaces of modern North American cities. Situated at the intersection of legal geography, anthropology, and Science and Technology Studies, this Article demonstrates how natural artifacts function as technologies of governance, thereby masking crucial political interventions behind a natural façade. The tensions between nature and the city, as embodied in both the construction and the regulation of street trees, provide an unusual perspective on the management of urban populations and on the intricate relationship between law, space, and technology.

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1. See, e.g., MITCHELL DUNEIER, *SEAWALK* (1999); GERALD E. FRUG, *CITY MAKING: BUILDING COMMUNITIES WITHOUT BUILDING WALLS* (2001); Richard Thompson Ford, *Law's Territory (A History of Jurisdiction)*, 97 MICH. L. REV. 843 (1999).

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Landscape, the built environment, ordinary space . . . is something not meant to be interpreted, to be read, to be understood. . . . Unlike almost everything else to which adults turn their attention, the concatenation of natural and built form . . . is fundamentally mysterious and often maddeningly complex.²

We cannot maintain that the pleasure that a man gets from a landscape . . . would last long if he were convinced *a priori* that the forms and colors he sees are just forms and colors, that all structures in which they play a role are purely subjective and have no relation whatsoever to any meaningful order or totality No walk through the landscape is necessary any longer; and thus the very concept of landscape as experienced by a pedestrian becomes meaningless and arbitrary. Landscape deteriorates altogether into landscaping.³

I. INTRODUCTION

We pass by street trees every day. Their existence as well as their particular location in the city seems obvious, innocuous, and natural. But as is the case with most taken for granted things,⁴ some excavation is bound to reveal a more complicated and even ideological story. This study focuses on such a story: the story of the clandestine governance of nature and of humans by way of nature—all through the construction and regulation of city street trees. This perspective problematizes the

2. JOHN R. STILGOE, *OUTSIDE LIES MAGIC: REGARDING HISTORY AND AWARENESS IN EVERYDAY PLACES* 10 (1998).

3. MAX HORKHEIMER, *ECLIPSE OF REASON* 37-38 (1947).

4. The use of the term “things” through the Article is intentional and based on a growing body of literature named “Thing theory.” See, e.g., Bill Brown, *Thing Theory*, 28 *CRITICAL INQUIRY* 1-22 (2001).

mundane display of urban space in general, and of urban street trees in particular, as technical and apolitical. Instead, it promotes an understanding of things and humans as constantly negotiating spatial order and disorder through law.

Specifically, this Article proposes that the art of governance is relevant not only to human populations, but also to nonhuman things and networks. It suggests that to various degrees, legal norms and practices must take physical matters into account. The Article is organized to correspond with the social stratification of streetscape into the bifurcated places of aboveground and underground, and the “in-between” place of ground level. While these strata, along with their binary juxtaposition, are socially constructed, they are also constrained by material and mental conditions, such as visibility and usability. Operating through regulations and guidelines, professional practices and everyday acts, a detailed bureaucratic apparatus attempts to know and govern these places by managing things into a certain order that both serves and controls humans. But such prefixed orderings seldom work. Instead, various dynamics flow among and between the street’s strata, between humans and nonhumans, and between living and nonliving things.

This Article explores some of these dynamics with regard to tree governance from the perspective of three spatial technologies: the grid, the grate, and the Dig-Safe procedure. While the grid demonstrates the governance of aboveground things and places, Dig-Safe is a story of underworld governance, and the grate exemplifies management on the interim level of the ground. Accordingly, the construction of these spatial technologies brings to the surface the potentially varied legal approaches towards matter. Relatively speaking, trees in the aboveground are susceptible to tight levels of management, while on the level of the concrete their materiality is negotiated more fluidly. Finally, in their underground manifestation as roots, the trees are mostly left unregulated, as the Dig-Safe procedure ignores their existence altogether. What is it in these three instances that makes the trees more or less susceptible to human governance? And what does this imply about the relationship between nature and the city? This presentation serves to highlight what largely goes unnoticed, that law and matter, *nomos* and *physis*,⁵ are inseparable and intertwined, both physically and discursively.

The Article is situated in the intersection of several discourses. First, it is part of the growing literature on law and geography. But while the existing literature is mostly preoccupied with discussions about a

5. See, e.g., DAVID DELANEY, LAW AND NATURE 93 (2003).

more abstract space—for example, the excellent but space-oriented *Legal Geographies Reader*⁶—it painfully neglects the physical and material properties and effects of spaces. Adversely, this Article takes matter into account. It proposes that together with their mental associations, shape and form prescribe certain legal constraints, acting upon law as significantly as law acts upon them. The perspective offered here makes a connection between two discourses: governmentality,⁷ and Science and Technology Studies (especially Actor Network Theory (ANT)⁸ and Thing theory⁹). While studies of governmentality do not explicitly take up ANT's call to consider the actancy of things, there is an affinity between Bruno Latour's theory,¹⁰ which suggests that nonhumans exert inherent control over humans, and Michel Foucault's theory, which suggests that material structures have specific political effects, quite apart from the class or other interests of the people controlling them.¹¹

Methodologically, this Article is based on ethnographic research carried out between May and November 2005 in four North American cities: Toronto and Vancouver in Canada, and Brookline and Boston in the United States. It relies on twenty-four in-depth interviews with city officials, mostly urban planners, city engineers, and urban foresters that operate within local governments. The interviews are supplemented by direct observations of various tree sites and other practices (coalition

6. THE LEGAL GEOGRAPHIES READER: LAW, POWER, AND SPACE (Nicholas Blomley, David Delaney & Richard Ford eds., 2001).

7. See generally MICHEL FOUCAULT, THE FOUCAULT EFFECT: STUDIES IN GOVERNMENTALITY 87-104 (G. Burchell, C. Gordon & P. Miller eds., 1991) (1978).

8. See, e.g., Madeleine Akrich, *The De-Description of Technical Objects*, in SHAPING TECHNOLOGY/BUILDING SOCIETY 205 (Wiebe E. Bijker & John Law eds., 1992); Michel Callon, *Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fisherman of St Brieuc Bay*, in POWER, ACTION AND BELIEF: A NEW SOCIOLOGY OF KNOWLEDGE? 196 (John Law ed., 1986); Michel Callon & John Law, *Agency and the Hybrid Collectif*, 94 S. ATLANTIC Q. 481 (1995); BRUNO LATOUR, POLITICS OF NATURE: HOW TO BRING THE SCIENCES INTO DEMOCRACY (2004); Bruno Latour, *A Few Steps Toward an Anthropology of the Iconoclastic Gesture*, 10 SCI. IN CONTEXT 63 (1997); Jim Johnson, *Mixing Humans and Nonhumans Together: The Sociology of a Door-Closer*, 35 SOC. PROBS. 298 (1988).

9. See, e.g., THE SOCIAL LIFE OF THINGS: COMMODITIES IN CULTURAL PERSPECTIVE (Arjun Appadurai ed., 1986); Brown, *supra* note 4, at 1; W.J.T. Mitchell, *Romanticism and the Life of Things: Fossils, Totems, and Images*, 28 CRITICAL INQUIRY 167 (2001); Peter Pels, *The Spirit of Matter: On Fetish, Rarity, Fact, and Fancy*, in BORDER FETISHISMS: MATERIAL OBJECTS IN UNSTABLE SPACES (Patricia Spyer ed., 1998); Dick Pels, Kevin Hetherington & Frederic Vandenberghe, *The Status of the Object: Performances, Mediations, and Techniques*, 19 THEORY, CULTURE & SOC'Y 1 (2002); Bruno Latour, *Visualization and Cognition: Thinking with Eyes and Hands*, in KNOWLEDGE AND SOCIETY: STUDIES IN THE SOCIOLOGY OF CULTURE PAST AND PRESENT (Henrika Kuklick & Elizabeth Long eds., 1986).

10. BRUNO LATOUR, WE HAVE NEVER BEEN MODERN (1993).

11. Nikolas Rose, Pat O'Malley & Mariana Valverde, *Governmentality*, 2 ANN. REV. L. & SOC. SCI. 83 (2006).

meetings, for example), as well as secondary data, such as state and federal statutes, municipal by-laws and policies, environmental reports, and newspaper articles.

II. TREESCAPING: FROM THE GROUND UP

Take fire exits for example: tell an expert how big the building is and he will tell you exactly where to place the exits. It's disciplined even at the very earliest part of the design. . . . But a sidewalk is managed chaos: there is nobody controlling this. Trees happen to be [on] the sidewalk. The course of accommodating the trees will bring some discipline and some rigor to how we manage the sidewalks.¹²

Literally and figuratively, trees—especially in their presence from the ground up—stand on a major crossroad. On the one hand, trees are conspicuous signifiers of nature in the city. But while they are perceived as living things that belong to the realm of nature, they are also routinely categorized as nonhuman entities, as things, or in the case of urban life, as street furniture. Foucault depicts the binary between living and nonliving things as central to natural history.¹³ Latour's work challenges an additional binary, that constructed between humans and nonhumans.¹⁴ The dialogue between the trees as living entities and as nonhuman things exerts various tensions into the management of street trees, while at the same time enabling certain forms of governance to emerge. In this sense, the tree is situated at the nexus of Foucaultian and Latourian discourses.

A. *Nature and the City*

Law makes, maintains, and reflects the distinction between words and things, *nomos* and *physis*. Legal acts of naming and numbering things serve to distance them from their material essence and reduce them into abstractions, in turn enhancing their visibility and turning them into manageable objects. Such acts of naming and numbering impose what is made to seem like a natural order between things.

In the case of trees, the legal project of distancing presents an even stronger stance of governance. It is through the enforcement of legal order that nature is not only conquered but also displayed in everyday

12. Interview with Peter Simon, Urban Forestry Specialist, Planning & Protection, North District, Toronto Parks & Recreation, in Toronto, Can. (July 18, 2005).

13. MICHEL FOUCAULT, *THE ORDER OF THINGS: AN ARCHEOLOGY OF THE HUMAN SCIENCES* 68 (1970).

14. LATOUR, *supra* note 8, at 62-82; *see also* Bruno Latour, *Technology Is Society Made Durable*, in *A SOCIOLOGY OF MONSTERS: ESSAYS ON POWER, TECHNOLOGY AND DOMINATION* 101-31 (John Law ed., 1991).

urban life. Law makes possible small victories of civilization over wilderness. Yet this form of management also erodes the very essence of nature that it seeks to preserve.

The streetscape is mostly regulated through less prestigious (and also less scrutinized) forms of legal norms and practices than those established by the more “important” and comprehensive statutes and case law. In particular, street regulation is largely administered through numerous professional manuals, for example the Traffic Control Manual,¹⁵ the Street Restoration Manual,¹⁶ the Municipal Boulevard Gardening Guidelines¹⁷ (all concerning Vancouver), and the Street Tree Guidelines (regulating Boston).¹⁸ Moreover, public street trees in North American cities are managed through semiformal practices by unelected “technicians” and “experts”—mostly city planners, engineers, and arborists. The interviews I conducted with some of these experts expose their roles and powers and describe their everyday management of trees in the city.

Richard Ubbens, Director of Toronto’s Urban Forestry Department, explains: “Toronto was . . . 80 percent forest two hundred years ago. Now what we are trying to talk about is keeping the forest and to put it back into the city.”¹⁹ Similarly, Eileen Curran, an urban planner by training who works for Vancouver’s engineering services, described the process of tree management on Vancouver’s streets as follows:

[W]e would just take 30 feet [between one tree to the next]—regardless of where [that turns out to be]. . . . If one of the trees becomes infested in something, the bigger the gap between them, the less likelihood for the infestation carrying on. Forests seem to survive *there*, with the trees all clumped together, but I guess the environment there is less hostile.²⁰

Curran implies not only a distinction between nature and the city,²¹ but also a human responsibility to protect such fragile nature from what has

15. ENG’G BRANCH, B.C. MINISTRY OF TRANSP. & HIGHWAYS, TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS (1999) (on file with author).

16. CITY OF VANCOUVER, STREET RESTORATION MANUAL (2008) (on file with the author).

17. CITY OF VANCOUVER ENG’G SERVS., GUIDELINES FOR PLANTING CITY BOULEVARDS, <http://www.city.vancouver.bc.ca/ENGSVCS/streets/greenways/guidelines.htm> (last visited Sept. 12, 2008).

18. BOSTON TRANSP. DEP’T, STREETSCAPE GUIDELINES FOR BOSTON’S MAJOR ROADS, http://www.cityofboston.gov/transportation/accessboston/pdfs/streetscape_guidelines.pdf (last visited May 2008).

19. Interview with Richard Ubbens, Toronto’s City Forester, in Toronto, Can. (May 27, 2005).

20. Interview with Eileen Curran, Streets Admin. Branch, City of Vancouver Eng. Servs., in Vancouver, Can. (June 30, 2005).

21. *Id.*

in turn become the city's wilderness.²² The process of planting trees in the city is therefore intrinsically linked (in the minds of the city bureaucrats interviewed here, at least) with the much larger relationship between nature and the city, and this process includes all that such a relationship entails.

From a different perspective, Vancouver's City Arborist Paul Montpellier also emphasizes the living nature of the tree: "It's not like managing park benches. Trees are alive and they're growing, and they relate to the other trees and to birds and squirrels and insects and everything else, and you're trying to manage a living system."²³ According to Bill Brown, a scholar of Science and Technology Studies, a tree is not an object and cannot become one.²⁴ The tree's status as a "living image"²⁵ distinguishes it from other street things, making it both more and less governable at the same time. Its thingness in the particular setting of the city street is an embodiment of the liminality of artifice and nature, a representation of the boundaries between human urban environment and untamed wilderness. The street tree is a living testimony of the human's desired otherness, a desire both expressed and constrained by law, which pretends to extend itself beyond the domesticated order over a surface of chaos that needs to be disciplined.²⁶

B. From Regulation of Tree Distances to Regulation of Human Movement

In the course of its utilization for the management of humans, the tree's living or organic quality is neglected. The tree is designed to resemble other sidewalk amenities. Treescaping is described by the Boston Streetscape Guidelines as an inherent part of an urban order intended to "[d]evelop a pedestrian friendly environment which encourages sidewalk activity and is both pleasant and comfortable for users."²⁷ The Boston Guidelines further explain this point: "Sidewalk elements like trees, plants, light fixtures, benches, kiosks, mail boxes, and newsstands should enhance the pedestrian environment, making it more enjoyable to pass through as well as to occupy. . . . Street furniture

22. SAM BASS WARNER, *THE URBAN WILDERNESS: A HISTORY OF THE AMERICAN CITY* 5 (1972) (listing a "healthy, decent environment" as one of the priorities in city planning).

23. Interview with Paul Montpellier, Vancouver City Arborist, in Vancouver, Can. (June 2005).

24. Brown, *supra* note 4, at 3.

25. Mitchell, *supra* note 9, at 177.

26. Pels, *supra* note 9, at 113.

27. BOSTON TRANSP. DEP'T, *supra* note 18, at 17.

should be installed to encourage sidewalk activities such as waiting, meeting, and sitting.”²⁸

Indeed, the various guidelines depict the city’s almost omnipotent involvement in the design and management of the public urban street. This involvement is exercised mainly through the application of rigid distance regulations.²⁹ The thirty-foot-distance rule mentioned earlier by Eileen Curran of Vancouver’s engineering department is only a fraction of a much larger body of “distance rules” that pertain to trees.³⁰ Vancouver’s guidelines, for instance, require a twelve-foot separation between the building line and the curb, with a minimum six feet of width reserved for sidewalks.³¹ Curran explains that this distance allows “[two] wheelchairs to pass” so that “they don’t have to be juggling and squishing, or . . . waiting to go around the tree.”³² Similar considerations prevail in Boston. Boston’s landscape architect mentions the “clinical requirements” defined by the Americans with Disabilities Act (ADA) such as a “4-foot clearance for a person with a wheelchair to navigate down a sidewalk.”³³ In addition, Boston’s Streetscape Guidelines for Major Roads recommends an extra one-foot “shy distance” on each side of the zone.³⁴

Curran explains that the practice of planting trees on grass boulevards “helps divide the vehicles from the pedestrians,” creating “a bit of a safe haven and a corridor.”³⁵ Specifically, through placing street trees between the sidewalk and the road, pedestrian traffic is funneled into the fixed corridor between buildings and curb lines. The trees are utilized as a sort of nonhuman policeman, restricting the movement from sidewalk to road and vice versa. This placement of trees in turn restricts the mingling of humans and machines, pedestrians and cars. Although the direct objects of these regulations are things—trees and curbs, building lines, and wheelchairs—they mostly target human behavior in public urban space, and human movement in particular. The strict boundary established by the linear alignment of trees in relation to curbs and building lines not only produces a sense of order in public space, but

28. *Id.* at 19.

29. *Id.*

30. *See, e.g.*, CITY OF VANCOUVER, STREET TREE GUIDELINES 12-13 (1991) (on file with author).

31. Interview with Eileen Curran, *supra* note 20.

32. *Id.*

33. Interview with Anonymous, Boston’s Landscape Architect, in Boston, Mass. (Oct. 7, 2005) (on file with author).

34. BOSTON TRANSP. DEP’T, *supra* note 18, at 17.

35. Interview with Eileen Curran, *supra* note 20.

also conceals the policing nature of this order behind the innocuous nature of trees. In other words, the regulation of tree distances serves as a policing technology.

But while the making of the public street focuses on the design of an uninterrupted “pedestrian environment” from a human standpoint, this process also establishes certain hierarchies between nonhuman street entities. According to Curran:

Often one of our challenges is to keep the light source available with the canopy of the tree. So when it’s full foliage . . . it . . . create[s] shadows, and people have a feeling then of being in danger like if they’re in [the] dark. . . . So if Bill tells me “oh, it’s a big, spreading tree”, we would probably keep it at a farther distance from the light. . . .³⁶

Curran demonstrates that the process of objectifying trees and lights subjects human city dwellers to security and risk-based management. This first form of governance poses the tree as an orderly vehicle for controlling disorderly human movements on streets. At the same time, a second form of governance is prescribed to ensure that the trees’ disorderly nature does not obstruct this same human movement by spreading its branches or by creating shadows. The tree is, then, the object of dual governance, what Bruno Latour aptly refers to as “programming” and “anti-programming.”³⁷

C. “Lollypop” Trees and the Natural Grid

*Remember to always plant the right tree for the right place.*³⁸

Through the imposition of detailed and mechanical managerial technologies that frame it as street furniture, the street tree is configured as a symbol of order. Simultaneously, the living nature of the tree makes it a symbol of disorder. This dialectic is utilized and enhanced by the spatial grid. This Part asserts that street trees reinforce not only the modern grid but also what I hereby refer to as the *natural* grid.

The construction of the modern grid has largely been attributed to Baron Haussmann’s planning of Paris in the 1860s, which was intended to prevent civic unrest in the city.³⁹ However, modern streets do not only serve “straightforward” sovereign purposes. They also exhibit disciplinary techniques, the goal of which is that nothing be out of

36. *Id.*

37. Latour, *supra* note 14, at 105.

38. CITY OF VANCOUVER, *supra* note 30, at 6.

39. RICHARD SENNETT, *THE USES OF DISORDER: PERSONAL IDENTITY AND CITY LIFE* 87-91 (1970).

control.⁴⁰ Indeed, the tree's reduction to a serial format of ordering (30ⁿ feet) enables humans to ignore "the being of things," while focusing on "the manner in which they can be known."⁴¹ Sennett regards New York City as an example of the construction of neutral spaces for the efficient advancement of capitalist interests "to be played upon as a chessboard."⁴² While everything "is graded flat" in the "natureless" part of the city, Sennett claims, Central Park is configured conversely as a Nature without a City,⁴³ exemplifying the human production of nature and city as binary figures of chessboard extremity.

Yet instead of juxtaposing the grid with nature, as Sennett suggests, urban forestry provides a two-in-one solution: the natural grid. Although less noticed, the transformation of Paris occurred not only by carving straight-lined streets, but also through the configuration of tree-lined boulevards.⁴⁴ The tree's alignment in relation to other trees, with building lines and curbs, fills the width of a sidewalk, which can then be designated solely to humans. This structure reinforces the horizontal street grid. Ian Buchanan, York Region's Manager for Natural Heritage, refers to trees configured in this horizontal alignment as "lollypop trees."⁴⁵

In other words, the trees contribute to the already grid-shaped street by both intensifying and softening the mechanical features of the modern grid. A field of knowledge is produced to make urban forestry into a science that can manage trees *en mass*, rather than in their singular formulations. If the forest was once the enemy of civilization⁴⁶ and outside of law,⁴⁷ it is now partitioned into highly regulated bodies of individual trees that are fixed in the concrete, watered through complex irrigation systems, and separated thirty feet from other trees to prevent any sort of "natural" revolt. Nature in the city therefore celebrates human dominance over nature.

40. *Id.*

41. FOUCAULT, *supra* note 13, at 60.

42. RICHARD SENNETT, *THE CONSCIENCE OF THE EYE: THE DESIGN AND SOCIAL LIFE OF CITIES* 55 (Alfred Knopf ed., 1990).

43. SENNETT, *supra* note 39, at 61.

44. ROBERT W. MILLER, *URBAN FORESTRY: PLANNING AND MANAGING URBAN GREENSPACES* 48 (1997).

45. Interview with Ian Buchanan, Manager of Natural Res. & Forestry Servs., York Region, in Toronto, Can. (Aug. 8, 2005).

46. SIMON SCHAMA, *LANDSCAPE AND MEMORY* 83 (1995) (describing the Roman idea that the forest was outside the writ of laws and the governance of the state).

47. ROBERT POGUE HARRISON, *FORESTS: THE SHADOW OF CIVILIZATION* 62 (1992).

Trees, like skyscrapers, also reinforce a vertical grid.⁴⁸ Garry Onysko, one of Vancouver's Tree Inspectors, explains tree management from a vertical perspective:

We were supposed to do what they call 'systematic pruning,' whereas you start one quadrant of your map, the northwest corner, and you move south and east, in a systematic manner that every . . . tree gets . . . pruned once every seven years. . . . [This way] they are [all] inspected and have a work history.⁴⁹

According to Onysko, street trees are categorized into two sizes: trees higher than thirty feet are defined as *SYS large*, and below thirty feet as *SYS small*.⁵⁰ "The purpose of deciding if they're small or big," Onysko explains, "is to determine which truck to send out, either a boom-truck or a man-cab [T]his division [of] trucks is standard in this profession in North America and I am sure throughout the world."⁵¹ A complex network of things and humans is therefore engaged in the management of trees: inspection crews are organized according to truck types, which are in turn built to fit various tree heights. Yet pruning machines not only reflect but also affect tree height, which is manufactured to fit "system size." Indeed, Vancouver's *Street Tree Guidelines* includes both a "Preferred Street Tree Species List," which states the "system size" of each species, as well as a parallel "Unsuitable Trees" list.⁵² Both lists offer the following general instruction: "Remember to always plant the right tree for the right place."⁵³

Indeed, the aboveground visibility of the street tree renders it a suitable object for the scientific, ordering gaze. The next Part discusses another aspect of human governance through trees, this time focusing on governance through crime.

D. *The "Broken Trees" Theory*

Bill Stephens, Vancouver's deputy City Arborist, elaborates on the relationship between aboveground trees and urban crime:

Downtown Eastside is a pretty bad neighborhood. . . . I've gone into the worst streets to plant trees. . . . Drug addicts would do anything, you know, people on cocaine or something they'll just break [the tree], just for the

48. SENNETT, *supra* note 42, at 57.

49. Interview with Garry Onysko, Vancouver City Tree Inspector, in Vancouver, Can. (June 29, 2005).

50. *Id.*

51. *Id.*

52. CITY OF VANCOUVER, *supra* note 30, at 10-11.

53. *Id.* at 6.

stupidity of it. So we have to put big huge trees with no branches for about 10 feet, and then once they get established they're safe.⁵⁴

According to Stephens, street trees turn into symbols of top-down governance and official order. Although Stephens underplays acts of vandalism as “just stupidity,”⁵⁵ one could also suggest interpreting these same acts as statements against a centralized order.

Boston's urban forester, MariClaire McCartan, also addresses the relationship between trees and crime. As an illustration, she explains why a certain urban park was selected for redevelopment: “there was a huge drug problem there So we cleaned it up and had a really good little [Arbor Day] ceremony. . . .”⁵⁶ By turning them into tree planting sites, the city civilizes urban spaces and “cleans them up” from crime.

But trees have not always been utilized as symbols of order and as crime fighters. For years, both academic studies and law enforcers argued that trees and other forms of vegetation actually increase the sense of fear in urban settings.⁵⁷ “Fear-maps” solicited from students, for example, were interpreted to suggest that fear is positively correlated with the presence of trees, shrubs, and walls that conceal vision and limit escape options.⁵⁸ Consequently, such studies suggested that changes in the character of campus outdoor spaces would decrease crime opportunities.⁵⁹

Similarly, Boston's urban forester MariClaire McCartan voices the instrumental perception of trees as technologies for the centralized ordering of public space, this time focusing on the feelings they arouse in law enforcers:

If you raise the canopy above the ground so you can see through that makes the police happy cause they can see through, [and it] makes people feel safer. . . . [S]o [the] cops will feel better that they can see through, they don't feel like anyone's hiding.⁶⁰

54. Interview with Bill Stephens, Arborist Technician, Vancouver Park-Board, in Vancouver, Can. (June 26, 2005).

55. *Id.*

56. Interview with MariClaire McCartan, Urban Forester, Boston Parks & Recreation, in Boston, Mass. (Oct. 14, 2005).

57. Bonnie Fisher & Jack Nasar, *Fear Spots in Relation to Microlevel Physical Cues—Exploring the Overlooked*, 32 J. RES. IN CRIME & DELINQ. 214, 228-32 (1995).

58. Jack Nasar, Bonnie Fisher & Margaret Grannis, *Proximate Physical Cues to Fear of Crime*, 26 LANDSCAPE & URB. PLAN. 161, 176 (1993); see Fisher & Nasar, *supra* note 57, at 218.

59. Fisher & Nasar, *supra* note 57, at 214-39.

60. Interview with MariClaire McCartan, *supra* note 56.

The law enforcement perspective illustrated by McCartan proposes a view of trees as enhancing disorder: the tree's trimming is posed as necessary for promoting feelings of security in lay people and policemen.

Recent findings suggest the contrary, establishing a negative correlation between the amount of trees and vegetation, and the existence and level of fear of crime. Accordingly, trees and grass maintenance are currently perceived as increasing a sense of safety⁶¹ and “[r]esidents living in ‘greener’ surroundings report lower levels of fear, fewer incivilities, and less aggressive and violent behavior.”⁶² A study conducted in 2001 compared police crime reports for ninety-eight apartment buildings in North American inner-city neighborhoods with varying levels of nearby vegetation.⁶³ The results indicated that the greener a building's surroundings, the fewer the crimes that were reported.⁶⁴ Other studies suggest that by supporting common space use and informal social contact among neighbors, trees increase the formation of “neighborhood social ties” and significantly increase the urban residents' sense of safety.⁶⁵

Similarly, Sherri Brokopp, Director of the Community Forest Partnership in the Urban Ecology Institute in Boston, describes how a group of elderly women shifted the level of crime on their street by planting vegetation in empty tree pits:

In this neighborhood there was a lot of drugs, there was a lot of prostitution Over the month every night these elderly women would come out with their cans and they would talk to each other and it looks nice, you know, kind of like made the street more attractive. One night . . . a prostitute was coming down the street who was kind of a regular there. And she said to the women: “Oh, you are the ones taking care of the flowers, we'll go somewhere else” [laughs]. . . . She respected their efforts, basically.⁶⁶

Brokopp believes that a “positive” use of the street drives criminals and crime away. Trees and flowers, then, are positive symbols in her approach,⁶⁷ thus resonating with James Wilson's “Broken Windows”

61. Frances E. Kuo, Magdalena Bacaicoa & William C. Sullivan, *Transforming Inner-City Landscapes: Trees, Sense of Safety, and Preference*, 30 ENV'T & BEHAV. 28, 44 (1998).

62. Frances E. Kuo & William C. Sullivan, *Environment and Crime in the Inner City—Does Vegetation Reduce Crime?*, 33 ENV'T & BEHAV. 343, 359-61 (2001).

63. *Id.* at 361.

64. *Id.* at 343-64.

65. Frances E. Kuo et al., *Fertile Ground for Community: Inner-City Neighborhood Common Spaces*, 26 AM. J. COMMUNITY PSYCHOL. 823, 844-48 (1998).

66. Interview with Sherri Brokopp, Dir. of Cmty. Forest P'ship, Urban Ecology Inst., in Boston, Mass. (Nov. 3, 2005).

67. *Id.*

theory, which suggests that “if a window in a building is broken and is left unrepaired, all the rest of the windows will soon be broken. . . . [O]ne unrepaired broken window is a signal that no one cares, and so breaking more windows costs nothing.”⁶⁸ In the case of trees, an orderly use of trees and nature signals the neighborhood’s respect for the law, while an unnatural use of space, and a “broken tree” in particular, signals lack of care and attention, thereby inviting more crime.

By focusing on the tree’s physical capacity to impair vision, the first group of experts sees the presence of trees in the city as increasing crime rates. These narratives focus on the nonliving thingness of the tree. On the other hand, Brokopp and the more recent studies outlined above emphasize the tree’s organic and green component as instrumental for inducing positive community ties and feelings of openness. One way or the other, both study groups and relevant interviews with city officials portray the urban landscape in general, and trees in particular, as elements that can and should be manipulated by a central administration for the explicit purpose of increasing human feelings of safety and security. Moreover, the management of trees not only enables, but also hides, the management of humans. However, while the first group of studies provides a rather simple modality of governance that regards space as physical and sees things in their material manifestation (as blocking escape of light, for example), the more recent group of studies adds mental considerations to the physical ones, thereby highlighting the social dimension of space.

The governance of nature in the city in general, and the management of public city street trees in particular, is a technology for governing humans. It is, in other words, part of a matrix of maneuvers orchestrated to shape the beliefs and conduct of humans in desired directions by acting upon their environment.⁶⁹ The design of public cityscape as a green tranquilizer is especially oriented towards the governance of crime. Crime has thus become a “defining narrative”⁷⁰ in how various residents and officials relate to city trees, and the

68. James Q. Wilson & George L. Kelling, *Broken Windows*, 247 ATLANTIC MONTHLY 29 (1982), available at <http://www.theatlantic.com/doc/198203/broken-windows>.

69. See Nikolas Rose & Peter Miller, *Political Power Beyond the State: Problematics of Government*, 43 BRIT. J. SOC. 173 (1992); David Garland, *The Limits of the Sovereign State: Strategies of Crime Control in Contemporary Society*, 36 BRIT. J. CRIMINOLOGY 445 (1996).

70. Jonathan Simon, *Megan’s Law: Crime and Democracy in Late Modern America*, 25 LAW & SOC. INQUIRY 1111, 1114 (2000).

construction of city treescapes is increasingly governed by concerns about crime.⁷¹

Another important aspect of human governance through trees is that it relies on the work of individual city residents and nongovernmental groups as much as on authoritative control mechanisms. The coalition responsible for counting and documenting city streets in Boston, led by Sherri Brokopp, is one of many examples for this sort of governance-at-a-distance.⁷² This type of crime governance through street tree design has become a technology for self-monitoring by urban residents, a new criminology for everyday life.⁷³

Still in the domain of the upper world, Part III explores another street technology, this time one that is situated on the ground. Through this on-the-ground technology, city officials negotiate humans and things on a much more fluid level than that demonstrated aboveground.

III. THE GRATE: GOVERNANCE ON THE GROUND

Experts have designed various techniques to address the tree's special need for soil around its roots when surface paving city streets.⁷⁴ One of the more ubiquitous techniques utilized in North America is the grate. Typically, the grate comes in two pieces that form a collar around the trunk of the tree.⁷⁵ Its advantage is that it mitigates between the tree's need for soil, water, and air, and human need for a compact surface to advance predictable walking.⁷⁶ By providing a thing that is both solid and also melts into holes or openings, and that is transient enough to be placed and replaced according to the (re)location of trees, the specific materiality of the grate solves a specific managerial problem that has to do with the particular materiality of humans and trees. The grate negotiates between the protection of trees from humans, on the one hand,

71. See Lindsay Farmer, *The Jurisprudence of Security: The Police Power and the Criminal Law*, in *THE NEW POLICE SCIENCE: THE POLICE POWER IN DOMESTIC AND INTERNATIONAL GOVERNANCE* 145 (Marcus D. Dubber & Mariana Valverde eds., 2006) (finding that the layout of property has a strong bearing on criminal activity).

72. Interview with Sherri Brokopp, *supra* note 66.

73. Garland, *supra* note 69, at 451-54.

74. See, e.g., Urban Tree Soil To Safely Increase Rooting Volumes, U.S. Patent No. 5,849,069 (filed Apr. 23, 1996) (issued Dec. 15, 1998).

75. To sample different grate designs, see, for example, Ironsmith, Tree Grate Info, <http://www.ironsmith.cc/TREE-GRATES-ABOUT.hmt> (last visited Oct. 3, 2008).

76. See Interview with Anonymous, *supra* note 33; see also Ironsmith, ADA, <http://www.ironsmith.cc/ADA.htm> (last visited Oct. 3, 2008) ("We have elected to make all of our grates with slot openings 1/2" or less because we believe it offers better all round pedestrian safety and comfort."). Engineers also give thought to how handicapped individuals will be affected by the grates. See *id.*; U.S. Access Bd., Ground and Floor Surfaces Technical Bulletin, <http://www.access-board.gov/adaag/about/bulletins/surfaces.htm> (last visited Oct. 3, 2008).

and the protection of humans from trees, on the other hand. But as is often the case with human technologies, this technology is also not immune to complications: the holes pose an obstacle for those humans who use canes to “read” their way through street space. “If the holes are governed they’re not gonna get their canes stuck in the holes,” Boston’s Landscape Architect explains about the city management of holes.⁷⁷

However, not only canes, holes, engineers, and sight-challenged people have a say in the making of the grate: trees are also active participants in this story. The trees continuously confuse the plans of grate engineers by growing their trunks into the grates, killing themselves in the process. Because it would be both time consuming and economically inefficient to enlarge the diameter of the grate’s central hole every time the tree grows into it, the only prefixed solution is to design a grate that perfectly balances the diameters of canes and tree trunks together with the required compactness of the soil. The solution to this physical problem comes through the technolegal regulation of grate holes. Indeed, regulation kicks in when things start making trouble, and “it is *only* once most of these anti-programs are countered that the path taken by the statement becomes *predictable*.”⁷⁸ Technical objects and people are thus brought into being through a process of reciprocal definitions in which objects are defined by subjects and subjects by objects.⁷⁹

The grate is but one example of an on-ground street thing that is designed and managed to negotiate the relations between humans and nature, particularly between the materiality of trees and the transience of humans. While the aboveground management of trees demonstrates a tight form of governance, mostly for the sake of human governance, governing through grates presents a much softer and reciprocal negotiation between humans and things. On the ground level, the physical thingness of the tree is taken into account rather than radically transformed.

Human control is much more difficult under the compressed concrete than either above or on the ground. Roots—which are the tree’s presence underground—are not only invisible to the human eye but are also too messy and unpredictable to correspond with aboveground grid requirements. Under the ground, then, the order of certain things gets much murkier.

77. Interview with Anonymous, *supra* note 33.

78. Latour, *supra* note 14, at 105.

79. Akrich, *supra* note 8, at 222.

IV. UNDERGROUND GOVERNANCE

[I]n the very first years of the new century, street trees began to die. Telephone companies pruned the crowns of trees in order to prevent ice storms from bending limbs into contact with lines and shorting them out. . . . Electricity companies soon decimate the national urban and suburban street trees tree population.⁸⁰

Tight tree management aboveground stands in stark contrast with the strong disregard for tree management underground. Underground space is not only less visible to city bureaucrats and experts, but it is also less visible to most other city dwellers. I suggest that this physical invisibility is the prime reason for the regulatory neglect of this space. This legal neglect is expressed most clearly with regard to things that seem disorderly by nature—trees for example. This Part explores the main procedure for translating the underworld into a more readable and visible on-the-ground map: the Dig-Safe procedure. It brings to light the ways that human relations, in this case the relations between city experts, not only manage but also create space. Moreover, it demonstrates that law's nonmanagement of trees in the underground can be as consequential as the most intense form of regulation.

A. *Engineers vs. Foresters; Roots vs. Pipes*

Most of the interviewees stress ignorance, controversy, and rivalry as central components in the relationship between the professional disciplines that govern street space: forestry and engineering. The following Subpart focuses on the relationship between urban forestry and city engineering and on the ways in which this relationship is projected onto and inscribed into the street's underground. At the same time, I suggest that physical matters in the underground impose and restrict the practices of these experts and, in a way, even shape their expertise.

Boston's Landscape Architect explains the tensions between the two professions, especially when underground space is concerned: “[M]y boss comes from an engineering background . . . [so] we kid each other all the time about [how] he'd like to pave everything and I'd like to grass everything.”⁸¹ Tom Brady, Brookline's Tree Warden, further illustrates the divide between engineering and forestry by referring to the history of the city's underworld as a dumping ground for undesired things:

Now the early part of the century somebody had this crazy idea to put water and pipes under the road We kept going through the 20th century

80. STILGOE, *supra* note 2, at 25.

81. Interview with Anonymous, *supra* note 33.

and guess what we discovered, that electric lines are pretty darn ugly so we want to put them underground I look at all these wires . . . at all these services going out of the buildings, it's very much dictated [by] where I can plant a tree. Not where I *want* to plant it, but where it *can* be replanted.⁸²

Similarly, Peter Simon, Toronto's Urban Forest Specialist, describes underground city space as embodying a historical battle between pipes and trees:

[W]e need[ed] to make [street space] as maintenance free as possible, so those two things are diametrically opposed. . . . [T]hey've only been planting [trees] . . . for 30 year[s]. Prior to that . . . nobody wanted trees on city sidewalks because they were going to get in the way of . . . possible road widenings. . . .⁸³

Tom Condon, Brookline's Senior Civil Engineer, further explains that "utilities don't usually conflict with each other," clarifying that "the biggest [problem] with utilities is their effect on . . . the roots of existing trees."⁸⁴

Although operating in different North American cities, Brady, Condon, and Simon all describe the relationship between trees and utilities in the city's underground as a battle for spatial survival. However, each of them presents a different perspective on who has the upper hand in this battle. According to Condon's "engineering" perspective the trees mess around with the pipes.⁸⁵ At the same time, Simon, who is an urban planner, laments that "[t]he tree is an orphan,"⁸⁶ explaining that "Toronto's community council is "generally not in favor of trees . . . plumbing or water [is] more fundamental for the city officials."⁸⁷

B. Translation Through Spokesmen

*Not to be overly cynical, but trees don't vote, trees don't talk, right?*⁸⁸

The controversy between engineers and foresters is deeply connected to the physical matters that they have come to represent. Each

82. Interview with Thomas Brady, Brookline's Tree Warden, in Brookline, Mass. (Sept. 28, 2005) (emphasis added); Inspection Tour with Thomas Brady, Brookline's Tree Warden, in Brookline, Mass. (Oct. 5, 2005).

83. Interview with Peter Simon, *supra* note 12.

84. Interview with Thomas Condon, Brookline's Senior Civil Engineer, in Brookline, Mass. (Sept. 28, 2005).

85. *Id.*

86. Interview with Peter Simon, *supra* note 12.

87. *Id.*

88. Interview with Carol Weinbaum, Tree Activist from Toronto's Casa Loma Neighborhood, in Toronto, Can. (July 5, 2005).

profession has developed a distinct vocabulary to address what it constitutes as the self interest of its respective object. Through the process of representation, foresters and engineers can articulate what “their” things say or want, why they act the way they do, and how they associate with each other, namely posing themselves as spokespersons for the trees or the pipes. A binary divide is thereby constructed between those who speak for the trees and those who speak for the pipes. Bruno Latour uses the term “translation” to describe this type of process.⁸⁹ Translation is the mechanism by which certain actors, in this case human experts, control others, in this case trees and pipes, through representing “the many silent actors of the social and natural worlds they have mobilized.”⁹⁰ Boston’s Landscape Architect describes the work of translation in the city council:

[W]e go into a meeting and there are 8 people around the room and they all have different agendas: developer, utility companies, and different people, we [landscape architects] are, and need to be the strongest advocates for the care and preservation of trees.⁹¹

Bruno Latour emphasizes that no thing, and for that matter not even humans, speaks on its own, but always through some thing else. Importantly, he suggests that “[l]ike all modernist myths, the aberrant opposition between mute nature and speaking facts was aimed at making the speech of scientists *indisputable*.”⁹²

In this case, the scientists are engineers and foresters, and their laboratory is the city street. In the process of negotiating their relationship, pipes are distinguished from roots. What pipes or roots say through the voices of the experts that now serve as their unelected spokespersons is inscribed onto the physical design of the street. Simultaneously, the physical character of trees and pipes also prescribes the scope of the relationship between their respective professionals, providing a material framework for their practices and thus defining their identity and even their survival as experts and as humans. In this sense, “not only are humans as material as the material they mold, but humans themselves are molded . . . by the ‘dead’ matter with which they are surrounded.”⁹³ In other words, rather than solely being defined by

89. JOHNSON, *supra* note 8, at 306.

90. Callon, *supra* note 8, at 224.

91. Interview with Anonymous, *supra* note 33.

92. LATOUR, *supra* note 8, at 68.

93. Pels, Hetherington & Vandenberghe, *supra* note 9, at 101.

processes of human signification, things may themselves illuminate their human and social context.⁹⁴

C. *Tree Recalcitrance*

I have suggested that as much as experts make matter—and in this case the relationship between engineers and foresters make pipes and roots and their relationship—matter also makes its respective experts. This prescribes what might seem obvious but is often ignored or understated in academic scholarship: that for it to work, the project of human governance must take the material nature of things into account. In the simple sense, things act upon humans as much as humans act upon things. Neither agency nor consciousness need to enter this equation, and the traditional distinction between subject and object can be maintained.⁹⁵

But sooner or later, agency creeps in. Indeed, some of the experts interviewed suggest that things object to their social enrollments. Scholars explain this phenomenon through a sense of “the world kicking back.”⁹⁶ Eileen Curran from Vancouver presents such an opinion: “We want 20-foot laneways to service the backs of the houses. . . .”⁹⁷

But . . . in the laneways we have a lot of what is called “volunteer trees”. . . . [T]he seeds get there somehow and they start sprouting and no-one pulls it out and they just keep growing, and in some areas they can be huge, huge trees. [W]e don’t plant any trees out there.⁹⁸

According to Curran, trees do not always conform: they voluntarily pop up in undesired locations or die, despite the intentions of the distinguished experts that planted them.⁹⁹ Other experts point out that although carefully distanced from one another, trees are still infected by pests; they mess up city streets by dropping their fruits on cars and their leaves on raked sidewalks.¹⁰⁰ Yet the most common complaint about street trees “kicking back” is the unpredictable behavior of their roots.¹⁰¹ Trees, as some experts point out, “send” their roots to penetrate into

94. THE SOCIAL LIFE OF THINGS: COMMODITIES IN CULTURAL PERSPECTIVE, *supra* note 9, at 5.

95. MICHAEL POLLAN, THE BOTANY OF DESIRE: A PLANT’S EYE VIEW OF THE WORLD, at xii, xiv-xv (2001).

96. SARAH WHATMORE, HYBRID GEOGRAPHIES: NATURES CULTURES SPACES 5 (2002).

97. Interview with Eileen Curran, *supra* note 20.

98. *Id.*

99. *Id.*

100. Interview with Peter Simon, *supra* note 12.

101. *Id.*

water pipes and heave sidewalks.¹⁰² Peter Simon from Toronto describes accordingly: “[w]hat tree roots are interested in is an area where they have oxygen and air. . . . [T]he roots have [their] own resistance to the situation, they change.”¹⁰³

According to this perspective, trees, and especially roots, resist being regulated by humans. But is this proposed tree resistance an anthropocentric figure of speech or an actual act of volition? While such a claim to consciousness by nonhumans may at first sound outrageous, it actually corresponds with certain human instincts: who has never experienced a vague sense that some things fail on purpose? This is especially true when nature is involved.¹⁰⁴ While initially the volition standpoint seems to empower trees, one might suggest that forcing trees to act in resistance to the human world actually grants humans the upper hand. In other words, the concept of “kicking-back,” utilized by several cultural geographers and scholars of Science and Technology Studies,¹⁰⁵ implies that humans *act* and trees then *react*. This idea creates a linear model of historical causality that does not do justice to the notion suggested by Actor Network Theory scholars, and supported here, that networks of actors work together over time to create new contingent realities.¹⁰⁶

Bruno Latour’s work is helpful in this context. Latour suggests stepping out of the subject/object divide into a world of actancy.¹⁰⁷ He proposes the term “recalcitrance” to capture the subversiveness of nonhuman actions:

Anyone who believes that nonhumans are defined by strict obedience to the laws of causality must never have followed the slow development of a laboratory experiment. Anyone who believes, conversely, that humans are defined at the outset by freedom must never have appreciated the ease with which they keep silent and obey. . . .¹⁰⁸

According to Latour, nonhumans—whether living or nonliving entities—are all actants: they can emerge in surprising fashions and get in the way of domination, thus defying human authority and making for messy, unsanitized, and leaky spaces.¹⁰⁹ This Article’s focus on the minute

102. *Id.*

103. *Id.*

104. *See, e.g.*, JOHN STUART MILL, THREE ESSAYS ON RELIGION: NATURE, THE UTILITY OF RELIGION, THEISM 3, 5-6 (Prometheus Books 1998) (1923) (discussing the cruelty of nature).

105. *See, e.g.*, WHATMORE, *supra* note 96, at 5.

106. LATOUR, *supra* note 8, at 70-77.

107. *Id.* at 75.

108. *Id.* at 81.

109. *Id.*

negotiations over street space brings to the surface some rudimentary assumptions about the role of humans and nonhumans in projects of governance.

D. *Dig-Safe*

Both utility and tree people interviewed as part of this study agree on one thing: that the space under the street is densely occupied and extremely limited. “The underground space is jam-packed,” says Condon, Brookline’s City Engineer,¹¹⁰ while Brookline’s Tree Warden Brady similarly asserts that “if you could magically peel out all the asphalt and look underneath there that whole roadway underneath . . . is a [*spider web*] of pipes like you can’t believe.”¹¹¹ Indeed, when referring to the underground world, most of the informants speak about a condensed space of chaos and messiness.

In order to manage the street’s underground and coordinate between the various entities that operate in this space, the American legislator came up with a unitary language: Dig-Safe.¹¹² Applied across North America, this procedure regulates underground construction by imposing a rigid form of communication between various city utilities. The regulation of Dig-Safe in various American states is quite elaborate. For example, chapter 82 of Massachusetts’ General Law requires a process of “premarking” the pavement with white paint before any excavations can be made in public or private rights of way.¹¹³ This “premarking”¹¹⁴ is followed by a “marking” process, which identifies “the location of an underground facility by placing marks on the surface above and parallel to the center line of the facility.”¹¹⁵ The relevant regulation further provides a detailed list of requirements for the marking stage of Dig-Safe: “Within 72 hours . . . every company shall mark the location of an underground facility by applying a visible fluid, such as paint, on the ground above the facility. The company may use an alternative marking method of color-coded stakes, color-coded flags or color-coded brush-type markers.”¹¹⁶

The colors of the marking are also specified by this statute, which defines: “(1) *red*—electric power lines, cables, conduit or light cables;

110. Interview with Thomas Condon, *supra* note 84.

111. Interview with Thomas Brady, *supra* note 82 (emphasis added).

112. *See, e.g.*, MASS. GEN. LAWS ch. 82, § 40 (2005).

113. MASS. GEN. LAWS ch. 82, § 40A.

114. *Id.*

115. 220 C.M.R. § 99.02 (2008).

116. *Id.* § 99.05.

(2) *yellow*—gas, oil, petroleum, steam or other gaseous materials; (3) *orange*—communications cables or conduit, alarm or signal lines; (4) *blue*—water, irrigation and slurry lines; (5) *green*—sewer and drain lines; (6) *white*—premark of proposed excavation.”¹¹⁷

The Dig-Safe procedure reduces the language of communication to its crudest form: locations of pipes are indicated by arrows, and pipe intersections are marked by diamond shapes.¹¹⁸ Underground space acquires an on-the-ground representation through the translation of its things and qualities into coded colors and straight lines. The complexity and depth of the underground world is flattened, literally, when projected and inscribed onto the concrete. Brown and gray colored pipes are translated into red, blue, and green arrows, while depth and width, as well as other compositions of this space, are mostly ignored. “I know, it looks great,” remarks Boston’s landscape architect, cynically concluding: “[T]hose people think they’re sidewalk artists.”¹¹⁹ Perhaps artistic, the simple arrow and color (de)signs are nonetheless understood by all utility workers, thereby preventing complex mitigations or vocabulary adjustments without requiring personal interactions. Moreover, administered by a company that is not involved in utility management (as defined by the federal law), the iconic language of Dig-Safe presents itself as unitary and neutral.¹²⁰

But something is awkwardly missing from the Dig-Safe picture: trees. No color in the Dig-Safe manual is assigned to map the tree’s roots, and no arrows are marked on the pavement to represent their underground location. The relevant legal norms completely ignore tree presence underground. How can one explain such a disregard by the law? Brookline’s Tree Warden suggests that trees are different from utilities in that their roots correspond with their aboveground location, so that anyone would know not to dig under the tree’s “drip-line” (line of canopy).¹²¹ In other words, the tree’s presence aboveground is supposed to speak for itself, rendering unnecessary the regulation of its underground space. The situation, however, is not so simple. Even amongst themselves, foresters contest the mirror reading of the tree’s underground through its aboveground representation. For example,

117. *Id.* § 99.02.

118. *Id.*

119. Interview with Anonymous, *supra* note 33.

120. 220 C.M.R. § 99.02.

121. Interview with Thomas Brady, *supra* note 82.

Toronto's Urban Forest Specialist claims that roots reach at least three times the drip-line measure.¹²²

If the root's location is not easy to ascertain without proper mapping, then why not utilize the Dig-Safe procedure to also mark tree roots? Boston's Urban Forester MariClaire McCartan explains that unlike utilities, "the roots will grow wherever they can, and [only when] we pick up the concrete [will] we know where exactly the roots are."¹²³ Hence, while pipes are "mappable" (however inaccurate this mapping might be), roots are deemed unpredictable and thereby unfit for regulatory mapping. Trees are equated with nonhuman nature and pipes with human technology, and legal norms seem to take the trouble of regulating only that which can actually be regulated by its nature. In this sense, legal norms and practices indeed take physical matters into account.

Consequently, while they are tightly managed aboveground, trees are left to their own devices underground. This split form of governance can again be explained physically, this time through highlighting the importance of visibility to the law. When aboveground, the trees represent nonhuman nature. Their control in this context is therefore important as an episode in the ongoing battle between nature and civilization. Moreover, the trees' visibility aboveground enables their physical use in the management of humans, and of city crime in particular. As this Article demonstrates, the issue of tree governance aboveground is a sub-issue of human governance. Underground, however, the governance of humans is much less relevant, and tree control therefore becomes less important.

V. CONCLUSION

This Article examined the project of urban governance from an unfamiliar angle: city street trees. Focusing on three spatial technologies—the grid, the grate, and Dig-Safe—the Article highlighted the importance of physical matter to the project of human governance. It demonstrated that human ordering of physical things into the exclusive categories of either society or nature affects the level of their regulation. Aboveground, the tree's categorization as a thing of nature makes it more susceptible to human governance, which in turn enables the city's domination of nature through domestication. At the same time, under the ground the tree's categorization as a thing of nature makes it less prone to

122. Interview with Peter Simon, *supra* note 12.

123. Interview with MariClaire McCartan, *supra* note 56.

human governance. The key to understanding this difference is the law's bias towards visibility.

Specifically, the Article suggested that together with their binary categorization into living/nonliving and into nature/human, the visibility of things to humans affects the nature of their governance. When one pays more attention to visibility, I offered, it becomes apparent that the differentiation of street strata into above, on, and under the ground is paramount to the regulation of city space. In particular, the construction of the natural tree grid aboveground represents a tight project of governance. This strict management of the highly visible tree foliage not only demonstrates the victory of human order over disorderly nature, but also enables the indirect governance of human traffic and crime. The second spatial technology discussed in this Article—the grate—is somewhat less visible to humans and thus also less important as a project of governing nature. The grate represents a softer instance of management than that of the grid: one which negotiates between the bark of the tree and human need for a flat surface. Finally, the underground management established through the Dig-Safe procedure takes only nonhuman things into account while ignoring trees altogether. This demonstrates that especially in the case of the human regulation of nature, the legal bias towards visibility very much defines the extent of the human governance of things.

By exploring the tree's similarities and differences in relation to other things, the Article also distinguished the particular thingness of the tree within what Latour calls the Parliament of Things.¹²⁴ Specifically, it suggested that the tree's thingness is unique in that it embodies a set of binary constructions. As aboveground street furniture, the tree has become an object of rigid regulations that reduce it into a product of detailed calculable distances within a "lollypop" street order. The process of treescaping the modern grid utilizes both "lollypop" order and natural disorder to reinforce and at the same time soften the mechanical features of urban governance. Simultaneously, the tree's "living image" also subjects it to other forms of representation and regulation. Those are especially relevant in the city's underground space.

Furthermore, the tree's seemingly symmetrical physical existence above- and underground both reinforces and challenges the bifurcated stratification of urban space. On the one hand, tree management is split according to these socio-material structures, applying strict regulations over its aboveground dimensions while outlawing its underground

124. LATOUR, *supra* note 8, at 227.

features, as was clearly demonstrated through the Dig-Safe procedure. On the other hand, professional spokespersons are assigned to represent the unitary tree, juxtaposing it with other things that are in turn unitarily represented by engineers: namely, pipes and other utility lines. As it oscillates between objectivity and subjectivity, living and nonliving, human and nonhuman, orderly and disorderly, city and nature—the street tree’s “thingness” defines the level of its human governance.

Importantly, the Article also questioned the monopoly of the one-way perception according to which humans govern things in general, and trees in particular. Weaving together Foucaultian perspectives on governmentality and Actor Network Theory’s emphasis on actancy, this Article challenged street space assumptions in three major ways. First, it examined how trees are instrumentalized by certain humans so as to govern other humans. Such is the case when human movement is funneled to certain street space and human fear is managed by hierarchically positioning trees and street lights. A second modality of governance explored here regards the numerous ways in which trees “kick-back,” exemplifying how things might unexpectedly act against their human governance, whether through stressing their agency or by referring to their actancy. Third, the Article demonstrated how static hierarchies inflicted upon things may also bounce back at humans, asserting dominance, rivalries, and schemes of unification between humans according to the things they represent. In this respect, trees also govern, or at least act upon, humans.