

Urban Informality as a Commons Dilemma

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I. INTRODUCTION

The phenomenon of informal housing settlements on the outer periphery of cities in the developing world is by now well known, popularized in part by movies like *City of God*¹ and by books like *Planet of Slums*² and *Shadow Cities*.³ The buying and selling of land in these settlements takes place largely outside of formal housing markets and formal planning and land use processes. An informal market and its accompanying norms fuel what is now regarded as the predominant mode of urbanization in much of the developing world's metropolitan cities.⁴

Informal settlements in Latin America ("barrios piratas" or "colonias ilegales"), particularly, have varied origins. It is important to emphasize that most informal settlements in Latin American cities are not "squatter settlements" involving the invasion by potential inhabitants of privately held land.⁵ Rather, they have sprung from subdivisions in which a "pirate" developer or land speculator acquires a relatively large piece of "raw" or unserviced

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1. CITY OF GOD (Miramax Films 2002).

2. MIKE DAVIS, *PLANET OF SLUMS* (Verso 2006).

3. ROBERT NEUWIRTH, *SHADOW CITIES: A BILLION SQUATTERS, A NEW URBAN WORLD* (Routledge 2005).

4. A similar phenomenon exists along the United States border with Mexico. Colonias are informal settlements located on former farm and ranching land in unincorporated rural areas in Texas, New Mexico, Arizona and California. It is estimated that about half a million people live in these settlements. Colonias are strikingly similar to informal settlements in Latin America and the rest of the developing world except that most colonia settlements are extra-legal rather than illegal. They exist in the absence of building codes and other land use regulations. See generally Jane Larson, *Informality, Illegality and Inequality*, 20 YALE L. & POLY REV. 137 (2000); Jane Larson, *Free Markets Deep in the Heart of Texas*, 84 GEO. L.J. 179 (1995).

5. See DAVIS, *supra* note 2, at 40-41.

urban land (usually on the periphery of a large city like Bogota and often on previously agricultural land) and subdivides it for resale to low-income purchasers.⁶ Although they are not settled by invasion of others' property, many of the homes will often lack properly registered title deeds to the property.⁷

These subdivided settlements are "illegal" primarily in the sense that they do not conform to local land use planning or regulatory controls (e.g. zoning and building codes, subdivision regulations) and lack basic urban infrastructure and services—amongst those water, electricity, sewage systems. Over a relatively short period of time, migrants come to these subdivisions, purchase lots of land, build houses on their respective plots, manage to acquire connections to the water, sewage, and other essential services necessary to create a functioning neighborhood.⁸ What is striking is

6. "[T]he pirate subdivider will first obtain a relatively large piece of raw land. The property is then bulldozed to establish the street pattern, and stakes or other markings are driven to indicate the boundaries of specific lots. A small sales office is established near the site, generally consisting of one room equipped only with a desk and a plot plan of the subdivision." William A. Doebele, *The Private Market and Low Income Urbanization: The "Pirate" Subdivisions of Bogota*, 25 AM. J. CoMP. L. 531, 536 (1977); see also Alexander Nifto Ruiz, *Formal and Informal Housing Practices in Bogota, Colombia: The Experience of Metrovivienda and Juan XXIII*, 36 REVISTA DE DERECHO PRIVADA 183, 188 (2006).

7. In some cases, the speculators who sell the land do not legally own it in the first place, but this is not the most common scenario. Some subdividers, for example, sold land to which they lacked formal legal title. Compounding the problem is that often people would resell the plots to others, sometimes selling them up to ten times, creating a tremendous amount of legal uncertainty. See Daniel Bonilla Maldonado, *Legal Pluralism and Extra-legal Property, Class, Culture and Law in Bogota*, 8-9, http://www.utexas.edu/law/academics/centers/humanrights/publications/Bonilla_Ext_raleal%20Property.pdf. Despite this uncertainty however, many barrio residents end up owning their land either through local government's regularization program or by negotiating directly with private owners. See, e.g., KENNETH L. KARST, MURRAY L. SCHWARTZ & AUDREY J. SCHWARTZ, *THE EVOLUTION OF LAW IN THE BARRIOS OF CARACAS* 17 (1973); Alan Gilbert, *On The Mystery of Capital and the Myths of Hernando DeSoto: What Difference Does Legal Title Make?*, 24 INT'L DEV. PLANNING REV. 1, 6 (2002).

8. One account of a newly arrived purchaser, Rosa Martinez, to the barrio Jerusalem, Ciudad Bolivar on the outskirts of Bogota, recounts a fairly typical process of how newcomers purchase and construct their houses on plots of subdivided land:

Our plot had 7 mts. x 14 mts.; at the time, the people who sold land would measure them with strings, and all the plots had the same size, 7 x 14. . . . And when we came to see it for the first time, when I came with my children, it was terrible. I didn't expect this hill. There was no transportation. . . . There was no water, no electricity, no roads, no access, and no people. When we arrived, there were only two small houses, those of the watchmen. Jerusalem was a dry hill, completely dry, with huge cracks, with impressive streams. There was a lot of maguey, which is, let's say, the original tree in Jerusalem, and chilco. That was it. . . . [L]ater, my partner found a

that the way in which these settlements are subdivided-into uniform lots with conventional street patterns-can make them seem indistinguishable from a formal, planned subdivision.⁹

Purchasers of the land are really "possessors" and not owners of their plots, even though they often acquire the land under some "color of title." The subdivider may hold a conventional title but the purchasers who take possession of the subdivided lots do so by way of an informal mortgage "note," a *promesa de compraventa* (a promissory note), in which they promise to make installment payments with interest with the expectation of receiving a recordable title at the end of the payment period.¹⁰ Nevertheless, as others

job and there they gave him some materials: some wood, some planks, and we started to work every Sunday; we would all come as in a procession and we began to build a little hut. . . . There was only one room, which served as living room, bedroom, kitchen, everything. Even as [a] workshop. The soil was not treated. There were no excavations, no bases, nothing. One would arrive and just live there. And the carpet. . . well, the grass was the carpet. Eh! That was for taking possession.

We arrived in 1982, after coming up here and building for a year. When we arrived, there were already many houses. . . . That same year, 1982. . . something like the business center of the neighborhood was built.

Bonilla, *supra* note 7, at 5-6; see also Ruiz, *supra* note 6, at 195 (describing the efforts of settlers who organized themselves to provide open rain systems and sewage collectors" and "acquired illegal connections from the city's power and water systems, which was provided to the formal high-income neighborhoods surrounding them.").

9. DAVIS, *supra* note 2, at 41. Also, as Rosa Martinez notes about the subdividers who helped settle Jerusalem:

The "Sociedad Urbanistica del Sur" was organized; they did not just come here. They commissioned a topographic study of the land, divided the blocks and left room for parks. People did not just come and build as they pleased. No. Now I see it: there is a design, a blueprint, where the blocks stand very much like Manhattan, right? They are very well ordered, very well ordered. The streets were wide, there were parks, it was well designed. Obviously, the urban planners did not live here; they had watchmen in charge of sales.

Bonilla, *supra* note 7, at 8.

10. See, e.g., Doebele, *supra* note 6, at 533. One example where the subdividers did not hold formal title is from a first person account of the settlement of Jerusalem, Ciudad Bolivar on the outskirts of Bogota, contained in a fascinating paper by Daniel Bonilla. In it, the narrator explains that:

The plots being sold were part of the Hacienda Casablanca. The owners of the estate. . . were people from the Gaviria family. The Gaviria family had abandoned this land; it was not occupying it; they only had a watchwoman, Dona Noemi Rios, who was supposed to take care of the whole estate. According to Mrs. Noemi, the Gaviria family never paid her a salary, benefits or anything for the twenty, thirty years she looked over the land. . . and then Dona

have written, despite the informal means through which they obtain their property the new inhabitants enjoy a security of tenure that is not dependent upon formal title to the property.¹¹ As one commentator has said, "[m]any of these illegal forms of land development provide the occupiers with plots from which they will never be removed. . . . Most purchasers of land in illegal subdivisions know perfectly well that they are the owners from the day that they pay their deposit to the illegal sub-divider. Such owners proceed with the building of their house unconcerned about the dangers of eviction."¹²

Informal settlements represent a form of "self-help" that enables poor families to secure decent housing at a time when many Latin American cities are exploding and expanding with new immigrants.¹³ This urban "self help," or urban informality, arises out of the failure of both the market and the government to provide an important or essential urban service, here affordable housing. The influx of new (and often global) capital and increased competition for scarce resources creates tremendous demand for affordable housing in major Latin American cities, pushing the borders of the city increasingly to the outer periphery. Both the subdividers and the purchasers of these subdivided plots are in a sense rationally responding to very high entry barriers to formal housing markets and transaction costs generated by cumbersome or inappropriate land use regulations.¹⁴

Noemi met with some lawyers, Mr. Calvo and Mr. Carvajal, and some twenty more individuals and created a company called "Sociedad Urbanizado del Sur." These twenty individuals came and divided the estate among them. Each one of them had a part, and each would sell his or her plots.

Bonilla, *supra* note 7, at 8.

11. See, e.g., Omar M. Razazz, *Examining Property Rights and Investment in Informal Settlements: The Case of Jordan*, 69 LAND EcoN. 341, 349 (1993) ("[E]mpirical evidence points to a continuum of security in illegal settlements that depends less on the exact legal status and more on occupant's perceptions of the probability of eviction and demolition (enforcement); as well as the availability of services and the passage of time.").

12. Gilbert, *supra* note 7, at 6-7 (noting the vulnerability of informal settlements, in practice, varies considerably and depends on a multitude of factors including the identity of the original owner, the location of the land, the alternative uses of the land, the nature of the government and whether or not an election is near).

13. Ruiz, *supra* note 6, at 185-87.

14. See, e.g., Doebele, *supra* note 6, at 533 ("[B]ecause the legal framework regulating the subdivision of land in such countries normally addresses itself to the problem of establishing middle and high-income housing, its standards, both as to lot layout and the provision of complete services, is totally inappropriate to the needs of low-income housing."); Bruce Ferguson & Jesus Navarrete, *A Financial Framework for Reducing Slums: Lessons from Experience in Latin America*, 15 ENV'T &

The question this short essay asks is: how do, or can, we understand the phenomenon of urban informality within a larger framework so as to reason about the choices it presents government and policymakers as they struggle to manage urban growth, development, and transformation in Latin American metropolitan cities? The contention of this essay is that the problem of urban informality presents in some ways a classic "commons" problem. The framework that I offer here casts the commons problem in the context of informal settlements as in part created by "regulatory slippage," a term I invoke to mean the marked decline or movement away from preexisting levels of management or control of the urban commons (over which public authorities have formal governing authority). Regulatory slippage creates the opportunity for self-interested behavior over a resource (or resources) whose access and use was previously limited (at least in theory) by regulatory control.

Zoning and other land use regulations manage many aspects of the urban environment like a commons. Land use regulations are aimed in large part at controlling and managing those tangible and intangible aspects of the urban environment in which urban residents share a common stake—e.g. shared open space, infrastructure, local amenities, and the quality of the physical environment (e.g., air, water, noise levels). Land use regulations do so by limiting how private landowners use their property as a way of limiting the impacts of that use on the urban commons. Once such regulatory control is loosened or sacrificed, as in the case of informal settlement creation, it creates the conditions for expanded access to and rivalry over those shared resources.

The commons problem in the urban context is in part a problem of open access to exhaustible resources and in part a problem of local governance. During periods of regulatory slippage, the issue of governance arises anew and should reopen the question of how best to manage these resources against the demands placed on them. That is, by looking closely at the reasons underlying the creation of informal settlements, we can begin to reason about those choices, taking into account the realities on the ground. The analytical traction that the Tragedy of Commons offers is to allow us to do so along the spectrum of public and private governance choices and the tradeoffs that they entail. This essay explores

URBANIZATION 201, 205 (2003) (noting that "various studies have shown that government regulations and formal and informal (bribe) charges in low- and middle-income countries raise the end cost of housing substantially.").

these choices, their tradeoffs, and offers some thoughts about each in the context of informal settlements.

II. URBANIZING THE "TRAGEDY OF THE COMMONS"

Although the commons has been a useful and persistent trope through which to think about collective resource problems in the natural resources context, it has less often been employed to think through resource problems in the urban context and entrenched urban problems such as affordable housing, urban sprawl/congestion, and residential segregation!stratification.¹⁵ We are accustomed to thinking about the commons as natural, open access collective resources like pastures, forests, fisheries and the like. In the classic tale "The Tragedy of the Commons," Garret Hardin warned of depletion of an open access, collective resource ("a pasture open to all") where it is difficult to exclude potential users and rational actors lack incentives to conserve or manage the resource.¹⁶

Many urban resources share much with Hardin's conception of the commons as a collective resource open to use by members of a community and prone to overuse or degradation. In particular, city or urban residents share access to a number of local tangible and intangible resources in which they all share a common stake. These resources range from local streets, schools, public accommodations, infrastructure to neighborhood ambiance, aesthetics, and the shared physical environment (including air quality and noise).¹⁷ The use, consumption, and management of these resources also invoke the type of choices that Hardin and his intellectual successors posed as solutions to management of the commons.

15. *But see generally* Lee Fennell, *Properties of Concentration*, 73 U. CHI. L.R. 1227 (2006); Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 YALE L.J. 549 (2001); Michael Heller, *The Tragedy of the Anti-Commons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621(1998); Bradley Karkkainen, *Zoning: A Reply to the Critics*, 10 J. LAND USE & ENVTL. L. 45 (1994); Carol Rose, *The Comedy of the Commons: Commerce, Custom and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986).

16. *See* Garrett Hardin, "Tragedy of the Commons," in *MANAGING THE COMMONS* (John Baden & Douglas S. Noonan eds., 2d ed. 1998).

17. Bradley Karkkainen refers to these collective resources as the "neighborhood commons." "Rather than constituting a single clearly-defined resource, the neighborhood commons is multidimensional, consisting of a web of sometimes-overlapping and sometimes-unrelated resources that may be used in different combinations... and some parts of which are 'open access' in that they may be used by non-residents as well." Karkkainen, *supra* note 15, at 68 n.91.

A. *Regulatory Slippage and the Urban Commons*

Open access land (such as an urban park or its streets and sidewalks) is the most obvious analog to the commons metaphor in the urban context. In the case of informal settlements, however, it would be too convenient and most certainly inaccurate to describe the land on which speculators create illegal subdivisions as a commons. The land on which illegal subdivisions are built is privately owned land and, as such, is subject to exclusion. The land is also subject to restrictions on its use much like any other urban land within the geographic and legal jurisdiction of the relevant municipal government.¹⁸ Thus, although the land is open, vacant, and often unguarded, legally it has restrictions on its use and development in the form of zoning and other land use regulations.

Informal settlements are able to thrive in cities across the world because, in spite of the existence of fairly well developed planning and land use rules designed in part to limit its use and manage its development/consumption, raw undeveloped land is nevertheless "up for grabs" to speculators and ultimately to as many settlers as the land can accommodate.¹⁹ The government's inability (or unwillingness) to effectively manage land over which it has exerted its jurisdiction creates the opportunity and the incentive for overuse (or misuse) of the land, and thus represents significant regulatory slippage. By regulatory slippage, I mean the movement away from either enforced or voluntary compliance with the restrictions on use of the resource in question (e.g. in this case, subdivision and building requirements). Regulatory slippage can occur when oversight of formally regulated land or other collective resources becomes too costly for the government, especially in a time of declining resources and when faced with an overwhelming demand on those resources.²⁰

18. See, e.g., Doebele, *supra* note 6, at 545-46 (describing the regulation of subdivisions in Bogota and other land use restrictions).

19. In the case of colonias, the land is even closer to the classic "open pasture" in that it is completely unregulated. As Jane Larson argues:

Most colonia settlements are extra-legal rather than illegal. When residents and developers created existing colonias, subdivision and sale of rural land for residential construction without provision of basic infrastructure or access to public services was lawful, and no building codes set housing standards. Yet where the state fails to regulate activities that in other settings are regulated according to accepted patterns, a kind of informality develops, albeit one built on legal and material nonconformity rather than illegality.

Larson, *Informality*, *supra* note 4, at 140.

20. Regulatory control over the commons may also decline as a result of a heavy

Consider an urban park whose quality declines dramatically because the volume or character of use has changed significantly and limiting or controlling such use begins to exceed government resources.²¹ Or the quality of neighborhood amenities, such as clean and safe streets, might begin to decline through an increase in demands by different users and uses of its open access spaces—such as in the case of excessive loitering or littering by visitors to the neighborhood—over which the government has been able to exercise little control. Lacking such management, the increase in these uses of common space will eventually begin to rival if not overwhelm other users and uses of the space.²²

In the case of informal settlements, the state/local government (and its regulatory apparatus) has been overwhelmed by the demand for low-income housing and the efforts by speculators to meet that demand.²³ The combination of lack of sanctions in the regulatory system and the sheer rate of pirate development has severely weakened the state and local government's ability to con-

influx of private capital which creates a government that is heavily dependent upon private actors pursuing their own self-interests. Sheila R. Foster & Brian Glick, *Integrative Lawyering: Navigating the Political Economy of Urban Development*, 95 CAL. L. R. 1999, 2021 (2007) ("As cities grow increasingly dependent upon private capital and resources and stymied by competition with other municipalities for those resources, their leverage over developers has seriously declined, as has their ability to control their social and economic destiny.").

21. As Elizabeth Blackmar convincingly argues in the case of Central Park in New York City:

[I]n the aftermath of the fiscal crisis in New York, when public agencies competed for severely restricted funds, taxpayers' reluctance to pay for the labor necessary to maintain public space offered a starkly visual iteration of a tragedy of commons in park meadows turned to sand lots or recreational facilities abandoned to arsonists. But the deteriorating condition of Central Park, for example, was attributed as much to mismanagement that permitted 'overuse' as an unregulated commons as to cutbacks in its maintenance force.

Elizabeth Blackmar, *Appropriating the Commons: The Tragedy of Private Rights Discourse*, in *THE POLITICS OF PUBLIC SPACE* 71 (Selma Low & Neil Smith eds., 2006).

22. Such "chronic street nuisances," according to Robert Ellickson, will ultimately require either a system of government control, enforcement of social norms through criminal law, or some form of private governance of these spaces. Robert Ellickson, *Controlling Chronic Misconduct in City Spaces: Of Panhandlers, Skid Rows, and Public Space Zoning*, 105 YALE L. J. 1165 (1996).

23. Jieming Zhu, *Commons and Anticommons: Role of the State in the Housing Market*, 11 (2005), <http://www.worldbank.org/urban/symposium2005/papers/zhu.pdf> ("When the supply from housing markets and public housing cannot meet the demand, it is hard for the government to strictly implement planning control as rules imposed on the self-built housing market which pursues the maximization of individual interests.").

trol and manage this form of urbanization.²⁴ By flouting existing zoning and land use regulations, both the subdividers and the individual purchasers are in a sense recreating the commons drama or tragedy. By *de facto* removing unappropriated land from regulatory reach it reverts in practice back to its natural, unregulated state where there is little or no restriction on its use.²⁵

To be clear, regulatory slippage has no normative content; it does not imply that there is some optimal level or regulation. It only implies that the prevailing practice of land use has slipped significantly away from the regulatory baselines and standards that formally govern it. In fact, conscious regulatory slippage might be a completely rational choice on part of the local government. Why expend resources to manage or regulate unappropriated land? If the land is not claimed or used productively, then the oversight costs may have been wasted. On the other hand, if the land is put to productive use—as in the case of informal settlements—the benefits of then invoking oversight and regulation (which are virtually absent when no one lives in the area) may be greater than the costs of that regulation.

B. The Tragedy of Informal Settlements

Rational or not, regulatory slippage creates the conditions for tragedy. As Hardin explained vis-a-vis the open pasture commons,

24. See, e.g., Doebele, *supra* note 6, at 545-47 (explaining the regulation of subdivisions in Bogota, the weak sanctions for violating the regulations, and the lack of administrative capacity to enforce the existing sanctions. "Since the pirate subdivider suffered no sanctions from neglecting to obtain approvals, and could sell his lots as quickly without them, he had no incentive to comply with even the [special district] requirements and generally did not do so.").

25. Some would argue that the emergence and growth of informal settlements are partly attributable to the high transaction costs of formal regulation (for both the subdividers and the individual purchasers) that create the incentives for establishing informal markets for collective goods. The extra costs—i.e. lack of information, red tape, waiting time—involved in complying with land use rules deter both subdividers and individual purchasers from entering the formal housing market and make building affordable housing too expensive to construct and purchase. See *Ciro Biderman, Martin Smolka, & Anna Sant'Anna, Urban Housing Informality: Does Building and Land Use Regulation Matter?*, LAND LINES, July 2008, at 14, 16 (citing evidence from Brazil to support the proposition that poor households often choose informal (untitled) houses over formal (titled) houses in response to regulations that require additional costs or "credentials" to enter the formal market and/or reduce design flexibility for house construction). Similarly, although the commons problem of the colonias in the United States can be attributed to the lack of regulation (or under-regulation, at the least), there is an argument to be made that these communities actually came into being because the few regulations in place, such as building and housing codes, were too onerous for those of limited means. See generally Larson, *Free Markets*, *supra* note 4.

individuals would rationally increase the number of cattle they grazed on the commons in order to maximize their personal benefit; the sum of rational individual strategies leads to the exhaustion of the resource or resources held in common. Much like the open green pasture depicted in Hardin's scenario unutilized (or underutilized) land is accessible/available to individual users for consumption (e.g. by speculators/pirate subdividers) where it would be costly or difficult (if not impossible) to exclude them.²⁶ And much like the herdsman in Hardin's tragedy, in the case of informal settlements, individual users (e.g. pirate subdividers) have no incentive not to continue to (over) populate and consume the land while externalizing the cost of that use to others.

As a result, urban land is being quickly consumed and its availability is slowly disappearing. Moreover, the costs eventually imposed on the local populace from the establishment and existence of informal settlements-i.e., the costs of upgrading, formalizing, and integrating the settlements into the urban metropolis-might be better (or more efficiently) spread through a different mechanism for using peripheral urban land to house the poor. The cost of opportunistic (or rational) behavior by pirate subdividers is easy to externalize once the land is taken outside of the regulatory framework that is designed to capture and spread these costs. While consumption of these lots is highly profitable for the pirate subdivider, the subdivider ultimately externalizes the costs of its consumption of the land onto others.²⁷ It is ultimately the public, the local government and its taxpayers who end up provid-

26. Although local officials have tried to do so by destroying buildings constructed by the new settlers, their resources to do so have been largely outstripped by the squatters/builders. See KARST ET AL., *supra* note 7, at 6-7 ("While some invasions are tolerated and even encouraged by government officials, others are resisted by the government to the point of destruction of the settlers' houses. It is not unusual to hear of a squatter settlement that has been constructed overnight, torn down by the police the next day, constructed again the following night, destroyed again, and reconstructed until the authorities tire of fighting."); Bonilla, *supra* note 7, at 9 (Rosa Martinez recounts that "[p]eople would work all night, people would not stop, and they had security committees because the Gaviria family had filed a legal complaint for illegal invasion of the...neighborhood. The police would come up, evict and burn down the huts....Then, in order to prevent this from happening, people started staying inside. They began to organize...the children and pregnant women and put them in the huts. After this, the policeman made an alliance with the sellers and profited much from it....They would...filter information on roundups so that we would know in advance.").

27. Another cost externalized by subdividers on the rest of the metropolitan area is the public health and environmental hazard spillovers from the informal settlements. See generally DAVIS, *supra* note 2, at 122-42 (providing examples of both naturally occurring and man-made externalities slum living creates).

ing for the eventual provision of infrastructure and services, often long after the subdivider has made its profits from the land.²⁸

For the individual purchasers, the cost of developing the land (the short term provision of infrastructure and basic services) is arguably part of the bargain of purchasing extremely low cost housing. That is, to the extent the subdividers leave to the purchasers the cost of providing this labor, the cost is captured in the below market price of the land upon which the housing is built. The cost that is more difficult to capture and account for is the cost to taxpayers in the city or local government who eventually pay for the "regularization"-upgrading the infrastructure and basic services of informal settlements. Often after many decades of incremental development, the city government will likely "regularize" or legalize these neighborhoods (and individual plots) by providing them with infrastructure.²⁹ In some instances, the original owners of the land may even encourage pirate subdivisions "in the shrewd expectation that the state will be forced to guarantee eventual compensation as well as infrastructural development."³⁰ These costs can theoretically be captured through imposing taxes and utility charges on the poor who inhabit these settlements, assuming they can afford to pay them.³¹ Nevertheless, the pirate subdivider's externalization of the cost of consumption of the land-in the form of infrastructure improvements-on the local government and its taxpayers is one that should be accounted for.

In addition to the consumption of urban land, a scarce resource in most quickly developing parts of the world, informal settlements place other common urban resources at risk of over-

28. *AB* William A. Doebele nicely explains:

In the case of illegal subdividers, the easy part of urbanization is obviously tracing of a street pattern and staking out lots. The costly and difficult elements, namely the provision of services and the construction of a dwelling, are passed on to the general public and purchaser respectively. Thus-like certain sectors of U.S. industry which have succeeded in externalizing the real social costs of production into the public sector via pollution, congestion, hidden subsidies, etc.-the illegal subdividers of Bogota have skimmed the cream while successfully passing on the most serious costs and intractable problems of the urbanization process.

Doebele, *supra* note 6, at 559.

29. *See, e.g., Ruiz, supra* note 6, at 188-91. In Bogota for example, the administration of Enrique Peñalosa (1998-2000) formalized the provision of water, electricity, and paved roads to 316 mostly low-income neighborhoods. *See* Ricardo Montezuma, *The Transformation of Bogota, Colombia, 1995-2000: Investing in Citizenship and Urban Mobility*, GLOBAL URB. DEV., May 2005, at 1, 2.

30. DAVIS, *supra* note 2, at 40-41 (citing Buenos Aires as an example).

31. *Id.* at 80.

There are ways that a traditional regulatory approach can be periphery of existing cities, their distance makes it costly (and difficult) to provide them water, electricity and sewage infrastructure.³² The purchasers themselves will find creative, and illegal, ways to acquire connections to municipal water, electricity and sewage systems.³³ These settlements also place additional, unaccounted for demands on anarchic traffic patterns and collapsing infrastructure in the metropolitan areas of which they are apart.³⁴ The cost of urban agglomeration—a patchwork of market rate housing in the center city and informal settlements on the periphery—may ultimately be the tragedy of the informal settlements.³⁵

III. LAND USE GOVERNANCE AND THE URBAN COMMONS

How might, or should, governing authorities respond to the actions of individuals (or a group of individuals) who take advantage of regulatory slippage by asserting some degree of control over finite land and other urban resources? The analytical traction or purchase that the tragedy of the commons metaphor offers in this situation is to prod us to think anew about the best way to approach this question along the public-private binary of governance approaches that Hardin and others have developed as a response to the tragedy.

The tragedy of the commons problem has traditionally been thought to require either a robust system of private property rights in the commons (in which individual owners could most efficiently internalize the costs imposed on the resource) or central government command and control management approach (which would constrain individual users by regulating the use and con-

32. See, e.g., Ruiz, *supra* note 6, at 191.

33. By not conforming to existing regulations, these areas are made vulnerable to earthquakes and other natural disasters because of location (periphery) and how/where houses are constructed. See *id.*

34. See DAVIS, *supra* note 2, at 128-29 (analyzing slum ecology).

35. As one recent report argues:

Neglecting the cities also makes both firms and households more vulnerable to the diseconomies of urban agglomeration—high costs of land, congestion and inadequate mobility within the city, a polluted environment, threats to the social order and to public health, and crime. These risks, while never entirely avoidable with population concentration, become greater and are *prematurely* imposed by very inadequate urban management.

CHRISTINE KESSELS, THE URBAN TRANSITION IN SUB-SAHARAN AFRICA: IMPLICATIONS FOR ECONOMIC GROWTH AND POVERTY REDUCTION (2005), http://www.citiesalliance.org/doc/resources/paper-pres/ssa/eng/chap_5.pdf.

sumption of the resource).³⁶ A third approach has developed more recently, which finds that in some instances the commons can be self-regulated by users under certain conditions.³⁷ Each of these approaches pose their own distinct obstacles and costs and thus do not presuppose a solution to the commons problem in every situation, and face particular obstacles when applied in the context of informal settlements. As Hanoch Dagan and Michael Heller have aptly put it, "the problem of managing commons resources concerns not only tragic outcomes, but also tragic choices: are we doomed to choose between our liberal commitments and the economic and social benefits available in a commons?"³⁸

A. Government Regulation

In the urban context, central regulation has traditionally been seen as the answer to the negative externalities and spillovers generated by individual users of the commons. Zoning and building regulations eliminate (or significantly reduce) negative externalities by restraining individual users and increasing the overall welfare of the commons. Central regulation is also the best response, or a second best choice depending on your ideological orientation, to the collective action/free rider problem that underlies the Tragedy. As Dan Tarlock has argued, the high transaction costs of private actions to protect the urban commons from overuse or degradation can pose an insurmountable obstacle to collective private efforts.³⁹ Lacking a solution to the free rider problem, government is forced to "intervene through a zoning ordinance to simulate the result that would have been accomplished had the initial landowners, but for high transaction costs, been able to impose a covenant scheme on surrounding landowners."⁴⁰ Zoning creates new collective property rights that establish positive incentives for building and maintaining attractive neighborhood environments.⁴¹

36. Hardin, *supra* note 16 at 213 ("[U]nder a system of private property the man of group of men who own property recognize their responsibility to care for it, for if they don't they will eventually suffer."). See generally Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 347-59 (1967).

37. See, e.g., ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (Cambridge University Press 1990).

38. Dagan, *supra* note 15, at 553.

39. Zoning can thus be justified because by itself "private collective actions fails to provide sufficient quantities of a desired public good." A. Dan Tarlock, *Toward a Revised Theory of Zoning*, 38 J. OF THE AM. INST. OF PLANNERS 145, 146 (1972).

40. *Id.*

41. *Id.*; see also Karkkainen, *supra* note 15, at 66 (Zoning is only partially about

There are ways that a traditional regulatory approach can be deployed to address the regulatory slippage that gives rise to the ephemeral commons. The government might reduce the costs of compliance with land use regulations, -e.g., streamlined processes which require less waiting time, more flexible building and other standards-reducing the incentives to shirk the system altogether. El Salvador has been cited as an example of a government reducing land-development standards and streamlining its process as a way of lowering entry or upfront costs to developers of affordable housing.⁴² Conversely, the government might ratchet up its efforts to sanction those who attempt to exploit the resources for individual gain -e.g., distributing parcels of land but failing to provide services. Doing so would reduce the opportunities for expanding access to the resource for those unwilling to comply with the rules.

The centralized regulatory model ultimately faces significant difficulties when applied to the tragedy of the commons in the urban context. Any means of reasserting management or control over the growth of informal settlements must account for the reasons underlying regulatory slippage in the first place. The main reason of the slippage is that the informal land market has emerged in response to the lack of an adequate supply of affordable housing and the high transaction costs of entering the housing market. Regulatory slippage creates its own brand of rational, self-interested actors for whom regulation is neither a constraint nor an incentive for compliance with its mandates. Unless regulatory reforms are aggressive enough to lower these costs and incen-

protecting individual property owners against the effects of "spillovers" or negative externalities that adversely affect the market values of their property. Zoning in urban neighborhoods protects both a homeowner's consumer surplus in their homes, that lies above the market value of the home, as well as their interests in the "neighborhood commons."); William Fischel, *A Property Rights Approach to Municipal Zoning*, 54 LAND ECON. 64 (1978). See generally WILLIAM FISCHEL, *THE ECONOMICS OF ZONING LAWS: A PROPERTY RIGHTS APPROACH TO AMERICAN LAND USE CONTROLS* (John Hopkins Press 1985).

42. Ferguson, *supra* note 14, at 205-06 explains that:

Before these reforms, government required full basic infrastructure (electricity, individual water connections, individual sanitation, drainage, paved roads) prior to sub-dividing. . . . Now developers need only lay out the sub-division (pegging out individual lots, common facilities and roads) and provide basic water (standpipes), sanitation (a latrine) and legal title. These changes have greatly lowered up-front costs, allowed incremental upgrading of this infrastructure, and stimulated a low-income development industry that now accounts for over one-quarter of all new lots and housing solutions in the country every year.

tivize additional housing development, this self-interested behavior will continue. Moreover, regulatory slippage often arises because the demand for the resource far outstrips the government's ability or capacity to exert effective control over it. The result is that the sheer volume of settlers and settlements may have gotten too big and too complex to be controlled by any single central administrative authority.⁴³

B. *Privatizing the Commons*

It is no surprise that many Latin American cities have turned to privatization solutions as a way of asserting control over, or management of, informal settlements. This section will briefly discuss these solutions and the pitfalls encountered in trying to address a complex problem with widespread social consequences. There are two types of privatization solutions to the tragedy of the commons onto which policies toward informal settlements map themselves. The first is a private property solution; the second is a market solution.⁴⁴ Both force the decision maker and private parties to account for the full social benefits and costs of their decisions in order to reach an efficient use of the resource-e.g. without externalities or spillovers. However, privatization solutions can easily be frustrated and prove unworkable where they cannot account for the full scope of externalities-e.g. all resources affected by a private property owner or all those affected by benefits and costs that flow from use of the resource.⁴⁵

1. The Private Property Solution

The predominant response to informal settlement programs in Latin America has been to "regularize" or "legalize" them by 1) providing them with improved (or "upgraded") infrastructure and public services-water systems, basic transportation and telephone lines, etc.-often decades after their creation; and 2) by providing formal property titles to individual homes and their possessors that occupy the settlements.⁴⁶ These two elements go hand in hand in allowing the city to incorporate the growth of

43. See Doebele, *supra* note 6, at 561.

44. See, e.g., Amy Sinden, *The Tragedy of the Commons and the Myth of a Private Property Solution*, 78 U. COLO. L. REV. 533 (2007).

45. See *id.* at 555-65.

46. See, e.g., John J. Betancur, *Approaches to the Regularization of Informal Settlements: The Case of PRIMED in Medellin, Colombia*, 3 GLOBAL URBAN DEV. 1 (2007), available at <http://www.globalurban.org/GUDMag07Vol3Iss1/Betancur.htm> (describing the regularization program, its goals, successes, and failures).

these settlements, physically and socially, into the city and to ensure that residents occupy housing with well defined property rights. But it is the second part of the solution, private property rights, that is important here. This very DeSotian solution is important for facilitating the selling and buying of property in the formal market by those occupying illegal settlements. Doing so allows individual homeowners to reap the full benefits of their labor in constructing their home and building their community. It also ensures that each homeowner internalizes the costs of their occupation to the entire city; that is, the city can now recoup its costs for infrastructure improvements both through payment for the titles and through property taxes.⁴⁸

The private property solution, however, is a fragile solution to the costs imposed by the informal settlements on the government and on the urban commons. First, on its own terms, establishing formal property rights may not facilitate the occupants of informal settlements to participate in the formal housing market to either capture the benefits of home ownership or to fully internalize its costs. As Alan Gilbert has found, evidence from Bogota, supported by studies from other parts of the world, suggests that possession of a legal title makes little or no difference to the availability of formal finance.⁴⁹ Although most self-help settlers now have legal titles, they are not able to use their property as collateral for other types of financing and wealth accumulation. This is in part due to the location of their homes on the periphery of the cities in geographically risky and hazard-prone areas, and to the fact that there is a limited (if nonexistent) resale market for these homes.⁵⁰

Second, and more fundamentally, private property boundaries should match (or encompass) the full scope of externalities or

47. See generally HERNANDO DESOTO, *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* (Basic Books 2000).

48. Gilbert, *supra* note 12, at 5 ("The World Bank long ago recognized that the profits made by a government agency could be used to finance other upgrading programmes elsewhere.").

49. See *id.* at 9.

50. "In Bogota, perhaps the most serious problem facing formal lenders is not the lack of legal title so much as the nature of the property on which the poor wish to borrow money. Colombia's savings and loans corporations have strict rules about the kinds of building and area on which they will advance loans. Even the socially progressive Colmea 'red-line' certain areas of Bogota. Those who live in what are considered to be risk zones will not get loans." *Id.* at 12; see also Peter Ward, Flavio DeSouza & Cecilia Giusti, *Colonia Land and Housing Market Performance and the Impact of Lot Title Regularization in Texas*, 41 URB. STUD. 2621-46 (2003) (suggesting that titling does not improve the marketability of colonias properties because almost no resale market exists at the bottom of the economic ladder).

there will be leakage and externalities will remain.⁵¹ Outside of a pure consumption problem presented by Hardin's grass-eating hypothetical-i.e., in which the cost was over consumption of grass without any other impacts beyond its physical boundaries, like air or water pollution for example-externalities and spillovers are likely to remain when the private property solution is applied to real world commons problems.⁵² Here, the overconsumption of the land is only part of the tragedy. Rather, as noted above, the costs of allowing unmanaged growth on the periphery of urban cities is a full range of impacts imposed both on common urban resources and on those who live outside of settlement boundaries.

Granting well-defined property rights to the land occupiers might allow them to recapture some of the costs of building the house and doing so in a way that would protect it against vulnerability of many of these homes to natural hazards.⁵³ However, it is difficult to see how such a solution would capture other spillover effects of building subpar housing in neighborhoods lacking basic infrastructure. These effects include higher levels of consumption of urban resources (water, infrastructure, etc) as well as environmental health risks, including the prevalence of various diseases, which can spread to the rest of the city's population. These costs and spillovers are even more difficult to internalize by stabilizing private property rights in individual plots.⁵⁴

So too could a private property solution recapture the public costs of upgrading of the neighborhood's infrastructure and services, a cost that is two to three times the cost of providing infra-

51. See Sinden, *supra* note 44, at 559 (explaining that this is because the scope of externality is more often physically, and not legally, determined).

52. *Id.* at 557-58 (finding the commons problem stems solely from the fact that one user's consumption of a unit of the resource diminishes the amount available to others). In that case, the tragedy may be solved by dividing the resource into parcels of property that are smaller than the scope of the original externality. Once the legal arrangement is changed by the delineation of property boundaries, the scope of the impact caused by grass consumption shrinks to the size of each private parcel and the externalities are internalized. *Id.*

53. D. Echeverry, *Providing Housing in a Developing Country: Sustainability Issues in the Colombian Case*, 5-6, Paper presented at the First International Construction Specialty Conference (May 23-26, 2006) (arguing many of these homes are built in areas subject to flooding, landslides or other natural hazards and are not built up to building codes which would protect them from these risks). "Just in Bogota, it is estimated that close to ten thousand families live in areas considered of intolerable risk." *Id.*

54. Ferguson & Navarrete, *supra* note 14, at 203.

structure at the outset to a new formal sector development.⁵⁵ The ability to recapture this cost is dependent upon the ability of private property rights to be able to bear her share of this cost via her property value (or more particularly, the government's tax on that value). As we have seen, however, this will be difficult in large part because the nature of the externalities not only exceed the property boundaries but they reinforce (and even spill into) each other. That is, the effect of building on the periphery creates negative health and environmental risks to the local and metropolitan population, which then in turn give rise to the difficulty of collateralizing the individual properties. As a result, the externalities remain and the tragedy persists.

2. The Market Solution

The other form of privatization that might reduce the incentives for overconsumption (or exploitation) of urban land and common resources is to create or mimic some form of Coasian bargaining in which transaction costs are reduced, eliminated, or minimized so that parties affected by the externalities will bargain to reach the optimal level of resource use.⁵⁶ This type of solution can be seen in Bogota's Metrovivienda, an agency designed to answer the demand for low income housing in part by competing against the informal market by offsetting the informal supply of developable land.⁵⁷ Acting as a land bank, the government acquires (through purchase) or assembles (through eminent domain) land on the periphery, retrofitting it with infrastructure, parceling it, and then selling it to developers for construction of affordable housing units. By doing so, the government is both lowering (if not eliminating) the high transaction costs of developing affordable housing in a legal fashion and creating additional certainty about the negotiated prices of the sale since the cost of the externalities are already reflected in the price.⁵⁸ It also avoids

55. *Jd.*

56. In the context of the Hardin's original tragedy scenario, this might mean that the cattle herders each be given a "right to graze," that each would have perfect information about the dollar amount of the harm caused by their individual grazing, and the cost to each herder of refraining from grazing. Further, it would mean that "all of those harmed and benefited by the [grazing] can be identified and located without cost, that bargaining is costless, and that the bargaining process is not marred by collective action problems or strategic behavior") Sinden, *supra* note 44, at 561-63.

57. See generally Metrovivienda Home Page, <http://www.metrovivienda.gov.co/portellibrerialphp/decide.php?patron=Ol.Ol> (last visited March 3, 2009).

58. First, Metrovivienda buys large tracts of land that are zoned as rural or semi-

over-fragmentation of the land, which is inefficient, and avoids the more expensive task of retrofitting the land after its development.⁵⁹

Metrovivienda has had some success at reducing the supply of available land for informal settlements, at reducing the cost of urbanized land, and at increasing the production of legal, affordable and good quality housing.⁶⁰ However, it has had less reported success in creating housing for the very poor. Part of this is because it is difficult to control the behavior of the developers who build the affordable housing and the lenders who fund it. Because this market model does not bring to the bargaining table the low-income potential homeowners, it may fail to optimally spread the benefits from lower transaction costs to potential homeowners, further incentivizing them to seek out lower-cost housing in illegal settlements. In other words, "[w]ithout careful controls and appropriate incentives in place, developers (and other supply agents including financial institutions and landowners) will absorb a greater share of the subsidy amount than if the subvention went in the form of a voucher (an upfront grant or "direct demand subsidy") to households that the families could use to shop among eligible housing units."⁶¹

C. *Collective Action in the Commons*

The choice between private property rights and government

rural. The organization has thoroughly studied and identified the major raw land parcels left in the Bogota metropolitan area. Once the decision is made to purchase a particular parcel, Metrovivienda contracts the local real estate appraisers organization to determine a fair market price, declares the property of "public use," and initiates negotiations with the owner... If the land owner is intransigent, Metrovivienda uses its condemnation powers to expropriate the land and pays the owner a fair market price set by legal fiat. In conjunction with land acquisition, Metrovivienda applies to and obtains permits from other government entities for development. The organization then puts in place trunk infrastructure and establishes parks and other common areas in conjunction with other authorities... With infrastructure in place, Metrovivienda sells parcels to for-profit and non-profit builders, who commit to construct and sell housing at a maximum price. The builders first construct sample units to market their future developments. The subsequent competition for clients among these builders, and the sale price ceilings set by Metrovivienda, join to control sale prices and ensure quality. Thus, builders pass on to homebuyers a substantial share of the great cost advantages created by Metrovivienda, which results from lower-land purchase costs and larger-scale and quicker development times. Ferguson & Navarrete, *supra* note 14, at 207.

59. Ruiz, *supra* note 6, at 192.

60. *Id.* at 192-94.

61. Ferguson & Navarrete, *supra* note 14 at 208 (pointing out why the Bogota government has been thinking about reconsidering its role as merely a land bank and proposing to directly grant financial assistance directly to families).

coercion is built upon a core assumption: that collective action, involving a group of individuals working to further their common interests, is unlikely in light of the free rider problem.⁶² Elinor Ostrom has famously questioned the assumption that collective action is improbable or impossible for managing common pool resources by citing examples of self-organized, cooperative management of natural resources where users devise and enforce their own rules, even in situations where the temptation to free ride exists.⁶³ In particular, she found that many tribal groups, villages and other local communities had long histories of effective collective action, including in situations where they lacked any formal mechanisms to control individual behaviors through a system of property rights or government regulation. Thus, a third option for managing common resources is a regime in which a community self-manages or assumes a greater role in governing those resources in sustainable ways.

Some would argue that the current landscape of highly-functional, physically-stable settled communities among the urban periphery is evidence that collective action results in effective management of the commons. That is, these settlements demonstrate that the poor are able to organize themselves in order to incrementally build a livable environment in peripheral areas, securing for themselves adequate infrastructure and eventually acquiring legal status.⁶⁴ Stories like these from the neighborhood of Juan XXIII are not uncommon:

The community started to organize themselves to provide open rain systems and a sewage collector. They acquired illegal connections from the city's power and water system which was provided to the formal high income-neighborhoods surrounding them. The land was occupied according to the families' needs. The houses were built incrementally and were allocated according to topographic characteristics of the terrain. Some of the Juan XXIII male population worked in the construction sector, and they acquired some of the modern skills to build their own houses with better materials such as brick and concrete.

In the 1970s, community organizations that had emerged

62. See generally MANGUR OLSON, *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* (Harvard Univ. Press 1965) (arguing that "unless there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests").

63. OSTROM, *supra* note 37.

64. Ruiz, *supra* note 6, at 197; see also Larson, *Informality*, *supra* note 4, at 140.

during the self-help construction process evolved to provide different kinds of services. Bavaria (the main Beer Company in Colombia) created a wooden box repair factory along with the community. There was a daycare center, a playground, a community house, a temporary market, and a sport area created by the community.⁶⁵

It is astonishing how, in the absence of a formal planning function or capacity, many of these settlements come to resemble other, formally planned "legal" neighborhoods with stable property regimes. They do so through the type of collective action generated by a close-knit community of "mutually vulnerable actors" who possess (or develop) norms of reciprocity and an internal private ordering which regulates asset and resource distribution.⁶⁶ Of course there are high transaction costs to collective action which many groups will not be able to overcome.⁶⁷ And self-regulation through collective action may do no better a job of internalizing the negative spillover effects to the larger metropolitan population than do private property or market solutions. However, where collective action does evolve, as the account above and others⁶⁸ suggest, these informal communities are able to self-regulate by developing norms different from those of the state legal ordering and do not depend upon the state for their developing.

The question that remains is what should be the relationship, or dynamic, between the self-regulating community and the formal legal system. There are at least two models that fall along the public-private spectrum of approaches that government might take in response to the ability of a community to overcome collective action problems. The first, as we have seen, are the type of regularization programs that already exist throughout the developing world which seek to integrate the fruits of collective action into the existing legal order by upgrading the community's infrastructure to the level it would be had government built the com-

65. Ruiz, *supra* note 6, at 195.

66. See generally Sara Singleton & Michael Taylor, *Common Property, Collective Action and Community*, 7 J. THEORETICAL POL. 309 (1992), available at <http://jtp.sagepub.com/cgi/reprint/4/3/309.pdf> (finding that a group possesses the capacities for a wholly endogenous solution to the tragedy of commons to the degree it approximates a community mutually vulnerable actors). *But cf.* ROBERT ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* (Harvard Pressed., 1991) (arguing that law is not always necessary so long as there is an agreement on social norms and a private ordering which can supplant laws and operate more efficiently than legal attempts to secure property rights).

67. See generally Bonilla, *supra* note 7.

68. *Id.*

munity. In the process, the government also harmonizes the regulatory norms in the community with its own, in effect bringing the commons back into its formal regulatory system. As discussed before, the government can recapture these costs, theoretically, by formalizing property rights in individual homeowners.

Another, similar approach might seek to leverage the existing community's collective action and social capital by formally facilitating or enabling its efforts to self-manage their neighborhood commons. This type of solution might resemble the Business Improvement Districts (BIDs) increasingly popular in the metropolitan cities in the United States. A majority of business owners vote to form a BID, agree to pay special assessments, and assume (at least partial) control and management (maintenance) of their neighborhood commons. American commentators have suggested ways to extend the BID model to residential property owners, particularly for inner city neighborhoods whose commons is arguably terribly under-regulated (e.g. under provisions of collective amenities and goods, inability to control crime), which would allow urban property owners to consolidate their properties, pay fees, and manage collective neighborhood goods (like streets, parks, and traditional public services) in inner city neighborhoods.⁶⁹

The privatization of the neighborhood commons is problematic in the American context in large part because it creates effective private rights in the neighborhood commons only for property owners and not renters, the majority of inner city populations, who have tremendous stakes and social capital invested in these neighborhoods, would be completely disenfranchised by such proposals.⁷⁰ In informal settlements, however, the majority (if not the

69. A similar proposal would create Block Improvement Districts (BLIDs), which would be formed by a supermajority of property owners who would pay fees and provide and manage block level collective goods. See Robert Ellickson, *New Institutions for Old Neighborhoods*, 48 DUKE L.J. 75, 109-10 (1998); Robert H. Nelson, *Privatizing the Neighborhood: A Proposal to Replace Zoning with Private Collective Property Rights to Existing Neighborhoods*, 7 GEO. MASON L. REV. 827, 833-39 (1999).

70. The reasons given for limiting governance of BLIDs to property owners suffers from a couple of important flaws. First, rationales for limiting governance to property owners assume that only owners have long term investments in their neighborhoods and that only monetary investments should count. Moreover, such rationales erroneously assume that tenants (unlike property owners) have relatively easy/cheap "exit" from neighborhood. . . . In my view, these rationales tend to overstate the investment that property owners have in the commons and understate the investment that non-property owning residents have in the commons. For example, as I have written elsewhere, there are human and social capital costs and benefits that residents accrue over time and that give them important long term stakes in the

entirety in most cases) are owner-occupied and thus avoid this problem. However, these owner-occupiers are also less able to pay the assessments and fees necessary to provide for and manage common pool goods because of the low valuation of their properties on the market.

The community's collective action might be more appropriately leveraged through public-private partnerships in which government provides initial support and investment of neighborhood amenities-infrastructure, communal facilities, parks and open space, etc.-and then allows the community to take charge and continue the work on its own and through partnerships with various government agencies. An innovative type of upgrading program in Medellin, Colombia called Programa Integral de Mejoramiento de Barrios Subnormales en Medellin ("PRIMED") followed this idea. PRIMED sought to upgrade informal settlements by generating and building on a culture of partnership in which the government made initial investments in physical improvements, housing conditions and tenure, and other collective amenities and fostered community ownership of the process so the community continued the work on its own.⁷¹ The "methodology of partnership with the community" was designed in part to lead toward a "comprehensive partnership of sustained development" in which "momentum had to be built and taken advantage of for further actions. The community had to gain ownership over the process, multiply the effects of interventions, and continue the effort through the institutions generated or strengthened and the education delivered"⁷²

PRIMED's success over the years is a mixed story. On the one hand, upgrading projects under the responsibility of government institutions and citywide NGOs were largely a success. In contrast, smaller projects sponsored by local community organizations and financed at the 75% level were far less successful, partly due to the high transaction costs to fully participating in this type

commons. This long term stake prevents the type of easy exit commentators invoke to justify excluding them from non regulatory commons management solutions.

See Sheila Foster, *The City as an Ecological Space: Social Capital and Urban Land Use*, 82 NoTRE DAME L. REv. 527, 577-78 (2006).

71. See Betancur, *supra* note 46, at 5.

72. As one scholar says about the thinking behind PRIMED, "the agency was convinced that if the community did not gain ownership, the program could not achieve its intended and more intangible goals" and would not have much of an impact on the local fabric; namely, the insertion of the area into the city, trust in government, its institutions, the rule of law, and continuation of the work. *Id.*

of public-private partnership.⁷³ Specifically, PRIMED argued that the failure of self-managed community projects was due in large part to the lack of experience of local organizations in complying with all the technical requirements involved and in managing the projects within the established stipulations, along with the inability of PRIMED to lend the community technical assistance.⁷⁴

It may be that a program that invested more government resources in boosting the community's capacity for self-governance would have made the goal of a comprehensive public-private partnership more realistic. Regardless, there are clear costs to a governmental program which seeks to enable, or facilitate, the collective efforts of a community with even healthy amounts of social capital, which these settlement communities have. These are costs that the government either should be prepared to pay (such as training costs) or acknowledge as serious barriers to public-private management of collective or common urban resources.

IV. CONCLUSION

This essay raises, but certainly does not answer, some of the difficult problems associated with, and governance choices presented by, the proliferation of informal settlements throughout much of the urbanizing developing world. What this essay contributes to the discussion is a framework in which to think through these choices. The tragedy of the commons choice between privatization and coercive government regulation has some purchase, this essay argues, in thinking about governing choices in this context. Both the problems and governance choices presented by informal settlements will vary across regions, to be sure, because of the variation in political, economic, and legal systems. Latin American cities, with which I am most familiar, tend to be relatively developed (or developing) in ways that allow us to think through the tragic results and choices presented by these settlements. In many ways the questions presented here that pertain to governing informal settlements extend to other types of urban commons resources. In future work I hope to explore how this framework might be applicable to and useful for thinking through other urban commons dilemmas.

73. *Id.* at 8 (citing fact that sixty small projects were proposed but only eighteen were funded and completed).

74. *Id.* at 8-9.